



Self-Medication Practice in Students of Dubai Medical College for Girls (DMCG), UAE

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Original Research

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Abstract

Introduction: Self-medication involves the use of medications to treat self-recognized disorders or symptoms, or the intermittent and/or continued use of a medication prescribed by a physician for chronic or recurring diseases or symptoms. With higher availability of information and easier accessibility to drugs, multiple studies have shown that healthcare students were more likely to apply such practices of self-medication than non-healthcare students.

Aim: To assess the prevalence of self-medication practice in students at Dubai Medical College for Girls (DMCG), UAE.

Material Methods: A cross-sectional questionnaire-based study was undertaken for two months between February and March 2022. Students from the first to the final year of DMCG participated in the anonymous survey after prior consent and approval from the Research and Ethical Committee at DMCG.

Results: Our study includes a sample size of 113 students from the first to the final year of DMCG. It was observed that 86.7% of the students from this sample size are accustomed to self-medication practices. Nonsteroidal anti-inflammatory drugs (NSAIDs), topical medications, antihistamines, antispasmodics/antiulcer drugs followed by antibiotics constituted the major self-medicated drug groups. 65% of the students participating in the study belonged to the senior batches of DMCG (3rd, 4th, and final year). More than 50% of the self-medicating students had a medical background of health care professionals in their immediate family members who were aware of the students' self-medicating practice.

Conclusion:

When medical students self-medicate themselves for common illnesses trusting their knowledge acquired by medical education, they take the challenge of drug treatment fearlessly on themselves or their close family members. A positive outcome of their self-medication boosts their confidence and makes them self-assertive. Ultimately 'Practice makes them perfect' by the time they become prescribing physicians. Conversely, 'Little knowledge is always dangerous' and exhaustive updated knowledge of the drugs is obligatory to prevent any mishap or misuse of drugs in their future as physicians.

Keywords: Self-medication; NSAIDs, Topical Medications

Introduction

Self-medication involves the use of medications to treat self-recognized disorders or symptoms, or the intermittent and/or continued use of a medication prescribed by a physician for chronic or recurring diseases or symptoms [1]. It could potentially have an advantage on the healthcare system by allowing access to medication in times of need or emergency and may contribute to the reduction in costs of prescribed drugs that are funded by the healthcare programs. However, with knowledge comes power and thereby potential misuse. These practices could be associated with increased risks such as widespread drug resistance, resource wastage, polypharmacy and serious health hazards including misdiagnosis, drug overdose, drug interactions, prolonged medication use or even death [2,3]. Several studies have shown that the practice of self-medication was more common in healthcare students than non-healthcare students [4, 5].

Aim

To assess the prevalence of self-medication practice in students at Dubai Medical College for Girls, UAE.

Material Methods

A cross-sectional questionnaire-based study was undertaken in DMCG between February and May 2022. The questionnaire was designed to collect information related to the practice of self-medication, the drug groups, and the individual drugs in the groups self-medicated with a key focus on any prior medical knowledge, frequency and source of the consumed drug classes, the outcome of the self-medication and any associated

adverse reactions encountered during this practice. Any relevant medical background in the student's family history and their awareness of this practice was also considered. The students from the first to the final year of MBBS participated in a survey after prior consent and approval from the Research and Ethical Committee of DMCG. The data collected was analyzed, and the results are expressed in counts and percentages.

Results

Our study includes a sample size of 113 students from the first to the final year of DMCG. It is observed that 86.7% of the students from this sample size are accustomed to self-medication. Nonsteroidal Anti-inflammatory Drugs (NSAIDs), topical medications, antihistamines, antispasmodics/antiulcer drugs, and antibiotics constituted the major self-medicated drug groups. The NSAIDs (91.8%) constituted the major drug group self-medicated followed by the topical medications (62.2%), the antihistamines (48.9%), antispasmodics (19%) and the antibiotics (16%). Psychotropic drugs and other medications constituted a very small percentage of the self-medicated drugs (5.1 and 7.1% respectively). 65% of the students participating in the study belonged to the senior batches of the college (3rd, 4th, and final year). More than 50% of the self-medicating students had a medical background of health care professionals in their immediate family members who were aware of their self-medicating practice. Pharmacies were the main source of obtaining the medicated drugs.

Results

Table 1. Self-Medication Practice in Medical Students	
Factors	Frequency (%)
Participants n=113	
Students who self-medicated	98 (86.7%)
Students who did not self-medicate	15 (13.3%)
Drug Groups n=98	
Analgesics/Antipyretics (NSAIDs)	90 (91.8%)
Topical medications	61 (62.2%)
Antihistamines	48 (48.9%)
Antispasmodic/Antiulcer drugs	19 (19.3%)
Antibiotics	16 (16.3%)
Other medications (Bronchodilators, hormonal drugs)	7 (7.1%)
Psychotropic drugs (Antianxiety/Antidepressants/Hypnotics)	5 (5.1%)
Analgesics/antipyretics (NSAIDs) n=90	
Paracetamol	67 (74.4%)
Ibuprofen	28 (31.1%)
Mefenamic acid	8 (8.9%)
Diclofenac	5 (5.6%)
Naproxen	1 (1.1%)
Topical Medications n=61	
Antimicrobials (Antibacterials & antifungals)	22 (36.0%)
Anti Acne preparations	21 (34.4%)
Ophthalmic Lubricants	21 (34.4%)
Topical Vitamin Preparations (Skin Moisturizers)	6 (5.7%)
Miscellaneous Topical Preparations (Nasal sprays, salicylic acid, hydrocortisone)	8 (13.1%)
Antihistamines n=48	
Cetirizine	24 (50%)
Loratadine	19 (39.6%)
Fexofenadine	4 (8.3%)
Diphenhydramine	4 (8.3%)

Antispasmodic/antiulcer drugs n=19	
Proton Pump Inhibitors	16 (84.2%)
Anticholinergic drugs	13 (68.4)
Antacids	2 (10.5%)
Antibiotics n=16	
Penicillins	11 (68.7%)
Tetracyclines	3 (18.7%)
Macrolides	3 (18.7%)

Table		2
Self-Medication Practice in Medical Students		
Factors	n=98	Frequency (%)
Frequency		
Occasionally		66 (65.3%)
Monthly		16 (16.3%)
Once a week		4 (4.1%)
Twice a week		4 (4.1%)
Three times a week		3 (3.1%)
Daily		5 (5.1%)
Duration of Practice		
One year		21 (21.4%)
Two years		11 (11.2%)
Three years		10 (10.2%)
More than three years		56 (57.1%)
Source of Medications		
Pharmacy		82 (83.7%)
Home		56 (57.1%)
Old prescriptions		15 (15.3%)
Friends		5 (5.1%)
Prior Knowledge of Drug		
Yes		80 (81.6%)
No		18 (18.4%)
Self-medicated Subjects		

Self only	56 (57.1%)
Self & family only	26 (26.5%)
Self & extended family plus Others	10 (9.8%)
Self & extended family	5 (4.9%)
Only family excluding self	1 (1.0%)
Success of Self-medication	
Successful	97 (99.0%)
Failure	1 (1.0%)
Adverse Drug Reactions Encountered	
Nil	96 (98.0%)
Yes	2 (2.0%)

Discussion

In this study the prevalence of self-medication among medical students at DMCG is observed to be 86.7%. Nonsteroidal anti-inflammatory drugs (91.8%) commonly known as analgesics or pain killers formed the predominant drug group medicated. This is observed to be similar to a previous study in Hong Kong (94%). Nevertheless, it is higher than previous studies on medical students in other countries. (6,7) Paracetamol (68.3%) and ibuprofen (28.1%) constituted the predominant analgesics self-medicated by the students. This contrasts to a previous study where acetaminophen (paracetamol) 20.3% and aspirin (6.2%) were the most used analgesics. (7) All the NSAIDs self-medicated by the students are acceptable for their purpose of academic stress related aches and pains provided they do not exceed the required daily dose and the recipients do not experience any of the associated adverse effects particularly NSAID induced gastritis.

Topical medications chiefly antimicrobial, ophthalmic, vitamins, antiacne, steroids and skin moisturizers were the second most commonly self-medicated drugs. Over the counter (OTC) options are plentiful for dermatologic conditions requiring topical therapies. OTCs are an accepted treatment for many common dermatological problems including allergies, acne, sunburn, and dermatitis. (8) Studies have shown that dermatologists form a relevant group of specialists recommending OTC medications at the highest rate resulting in a surge of topical pharmaceutical demand. Our study comprised young medical students from the first to the final year of their study. The anticipated dermatological concerns of this age group generally include acne, dryness of skin and seborrheic dermatitis. Furthermore, as participants of our study group include medical students pursuing a challenging professional course, minor ophthalmic ailments are bound to occur. Consistent with these factors the practice of self-medication of topical medications

including antimicrobial, antiacne and ophthalmic lubricants was observed to be prominent. (62.2%). These products are usually safe and may aid in the treatment of common dermatological problems but an inappropriate selection due to inexperience can exacerbate the condition or result in systemic toxicity.

Antihistamines were self-medicated to an extent of 48.9% in our study occupying the third position. The most common indications for self-medication of antihistamines are allergic rhinitis, sinusitis and urticaria. The adverse effects of antihistamines (particularly the first-generation antihistamines) that could be troublesome to the students are sedation, drowsiness, and lack of concentration. Loratadine and cetirizine were the prominent self-medicated antihistamines in our study followed by fexofenadine and diphenhydramine in contrast to a previous study where levocetirizine, hydroxyzine and promethazine were also self-medicated. (9). Loratadine and cetirizine belong to the second-generation antihistamines which have a comparatively lesser incidence of sedation and drowsiness as they do not cross the blood-brain barrier. This reveals the awareness and knowledge of the students in their selection of antihistamines as more than 70% of the students participating in this study belonged to the senior batches of DMCG (3rd to final year of MBBS).

Anticholinergic and antacids constituted around 19.3% of self-medicated medications. Hyoscyamine and dicyclomine were the prominent anticholinergic drugs self-medicated.

These drugs are generally needed by young girls for abdominal pain and cramps. They are usually safe on short term emergency use but are associated with troublesome anticholinergic adverse effects like dryness of the mouth, urinary hesitancy, and drowsiness on long-term use. Proton pump inhibitors (omeprazole and pantoprazole) were the predominant drugs self-medicated for the control of hyperacidity. Adverse effects to the proton pump inhibitors are being reported more and more as they are being widely prescribed for unapproved indications. Anaphylaxis to pantoprazole has been recently reported in an elderly patient as a case report (9) Medical students should be encouraged to be cognizant of such case reports to regularly update their knowledge for vigilant prescribing practices in their career as future physicians.

Antibiotics were self-medicated to an extent of 16% by the students. Penicillins followed by azithromycin and tetracyclines were the predominant antibiotics self-medicated in contrast to a previous study where azithromycin was the main antibiotic self-medicated. Self-medication of antibiotics is common among medical students as they study the pharmacology of these drugs during their medical curriculum. This produces a false sense of confidence in them related to self-diagnosis of diseases. Self-medication with antibiotics in medical students is concerning because they are future prescribers of antibiotics, who are supposed to promote rational use of antibiotics. Antibiotic misuse puts patients at risk for adverse drug reactions, false symptom relief, and promotes

multiplication of drug-resistant microorganisms. (10)

The duration of the self-medication practice varied from one to more than three years. As this study included students from the first to the final year of MBBS it directly corresponds to the initiation of this practice after their enrolment in the medical school. Medical students generally tend to self-medicate as they have an easy access to knowledge related to the uses and adverse effects of most of the commonly needed drugs. (8) The number of students involved in self-medication was also seen to be higher in the senior batches of the students which correlates proportionately to their seniority related acquired medical knowledge and skills. This is also seen from the fact that 97% of the students could manage their problem successfully as 80% of the students had prior knowledge of the self-medicated drugs and only 2% of them experienced adverse effects of the medicated drugs. The family members of more 54% of the students were also from a medical background and were aware of the self-medication practice of their girls either on themselves or their close family members (76%). The source of obtaining the drugs was mainly the pharmacies (83%) or their homes (54%).

Conclusion

When medical students self-medicate for common illnesses trusting their knowledge acquired by medical education, they take the challenge of treatment fearlessly on themselves or their close family members. A positive outcome promotes this practice making them self-assertive. Eventually 'Practice makes

them perfect' by the time they become prescribing physicians. On the contrary, 'Little knowledge is always dangerous. As the self-medicating students advance towards attaining their medical degree it is essential for them to keep abreast of all the current medical treatment. An exhaustive updated knowledge as well as the recent approaches in drug treatment is obligatory on their part to prevent any mishap or misuse of drugs in their future as physicians.

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