

Patterns and Prevalence of Self-Medication Practices among Medical Students in Oman

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ABSTRACT

Background: Self-medication which is the selection and self-administration of medicines to manage or treat symptoms, has become a quite common practice that is on the rise.

Objectives: exploring the prevalence of self-medication practices among medical students, and its different patterns across the batches of the medicine program, and identifying and assessing the different reasons behind self-medication practices among medical students.

Methods: A cross sectional study directed at medical students at the National University of Sciences and Technology in Sohar and Rustaq's campuses, in Oman. It included students from the second, third, fourth, fifth, sixth and seventh years. 212 responses were obtained in total. Data was collected through confidential anonymous questionnaires after obtaining consents.

Results: Of the 212 responses, 88.7% were females, while only 11.3% were males, their ages ranging from 17 to above 26. The prevalence of self-medication was 63.2%, most of those who self-medicated were younger, female students, with over-the-counter drugs due to previous experiences and mildness of the symptoms. The most common ailments that prompted the students to self-medicate included headaches, cold and fever.

Conclusion: the prevalence of self-medication amongst medical students in the National University of Sciences and Technology in Oman, is quite high. This calls for an early intervention and raising awareness on the topic.

Keywords: Medication, medical students, self-medication, self-treatment.

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I. INTRODUCTION

Self-medication is defined as the selection and self-administration of medicines to treat or manages self-diagnosed or self-recognized symptoms and conditions [1].

Self-medication holds several benefits among which are activating the role of the patient, decreasing the burden on the healthcare providers and the government, and increasing ease of access to medicine and the relief of the patient [2]. However, potential risks of self-medication limit its spread and make it far from being a safe practice. Such risks include incorrect self-diagnosis, delay in seeking medical advice when needed, infrequent or severe adverse drug reactions, dangerous drug interactions, antimicrobial resistance, overdose, and many others [1].

Self-medication reasons differ on a wide range, from urge of self-care, lack of health service, lack of time for hospital visits, ignorance, the ease of availability of drugs and the mildness of some diseases. Family, friends, law, availability and society [2] are all important factors that play a major role in influencing this practice.

Self-medication is still considered to be one of the most common ongoing debates in the medical field. Supporters stand for the cause, believing that self-medication can be saving a lot of time, effort and unnecessary hospital visits, including the world health organization that published "Guidelines for the regulatory assessment of medicinal products for use in self-medication" where self-medication is defined as the primary public health resource in health care system [2].

On the other hand, those against self-medication believe that this minor act could cause lifelong consequences, like microbial resistances [3]. The fastest adverse effects that appear shortly after drug intake were reported to include Nausea, fatigue, lack of attention, headaches and even abdominal cramps associated with diarrhea.

The low knowledge on the topic of self-medication and its possible harmful side effects could be one of the leading causes of this practice still being on the rise. This study aimed at exploring the prevalence of self-medication practices among medical students, and its different patterns across the batches of the medicine program, and identifying and

assessing the different reasons behind self-medication practices among medical students.

It would help in drawing important conclusions that could open the doors for a quick intervention aimed at educating and raising awareness to reduce further possible future complications of self-medication.

II. METHODS

The study proposal was approved by the ethics and biosafety committee in the college of medicine and health sciences in academic partnership with West Virginia University, as the committee reviewed the protocol and found it suitable on ethical ground.

A cross sectional study was directed at the medical students from second year all the way through to seventh year students studying in Sohar and Rustaq's campuses at the National university of Sciences and Technology in Oman. An average of 35 students from each batch filled the online questionnaire after consenting to participate. These confidential, anonymous, self-administered online responses added up to a total of 212 responses from February 12th to the 16th of August 2020.

The definition of self-medication was explained before the informed consent in the questionnaire, the objectives were also briefly described to give the participants an insight on the main aim of this study.

Basic demographic information was collected at first, this included gender, age, year of study, place of residency specifying if it was in the hostel, a flat, or living at home with family members. The questions then proceeded to shed the light on self-medication practices, whether it was practiced in the first place, and if so, participants were asked to specify the type of medication taken, the frequency of administration of the medication, and the exact drugs taken like analgesics, antibiotics and even beta blockers. The reasons behind the practice of self-medication and adverse effects as the result of self-medication were also analyzed.

III. RESULTS

From the total of 212 responses, 188 were females (88.7%), while only 24 were males (11.3%), with more than half of the participants (54.2%) aged between 21 and 23. 189 of the total responses reported to live in a hostel or a flat (89.2%), while only 23 live at home with other family members (10.8%). A few demographic characteristics are demonstrated below in Table I.

TABLE I: PREVALENCE OF SELF-MEDICATION AMONG DIFFERENT BATCHES OF THE M.D. PROGRAM

	Students (n = 212)	Percentage (%)
Gender		
Male	24	11.3
Female	188	88.7
Year of study		
Second	41	19.3
Third	32	15.1
Fourth	49	23.1
Fifth	42	19.8
Sixth	19	9
Seventh	29	13.7

63.2% of respondents confirmed that they practice self-medication, that is 134 out of the 212 students that participated.

The most commonly used drugs that were taken by 77 of the respondents were over the counter drugs (57.9%), followed by 33 of the respondents that take both prescription drugs and over the counter drugs (24.8%). While the least taken drugs without a prescription were painkillers and supplements like vitamins.

The frequency of administration of self-medication by more than half the participants (52.5%) is less than once a month. The drugs that were almost always used in self-medicating were analgesics, while allergy drugs and antipyretics were rarely taken, diuretics and antidepressants were never used while self-medicating.

The most common drug that was used to self-medicate other than the already mentioned drugs was Ranitidine and a few have reported taking anti acne medications as well, such as Skinoren.

The following bar chart visually demonstrates the main reasons behind the practice of self-medication, with 58%, that is 80 of the participants practice it due to a previous encountered experience.

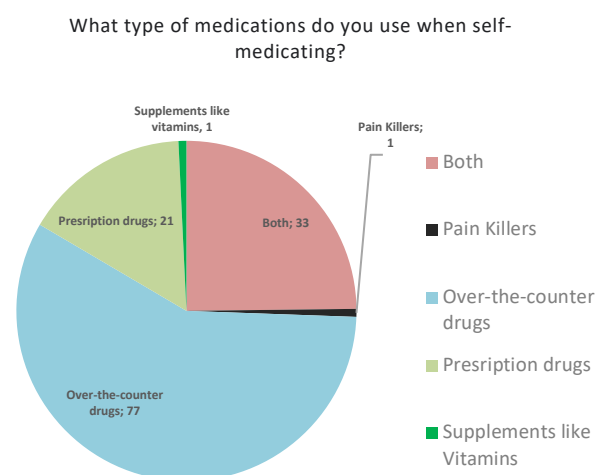


Fig. 1. Reported reasons behind the practice of self-medication.

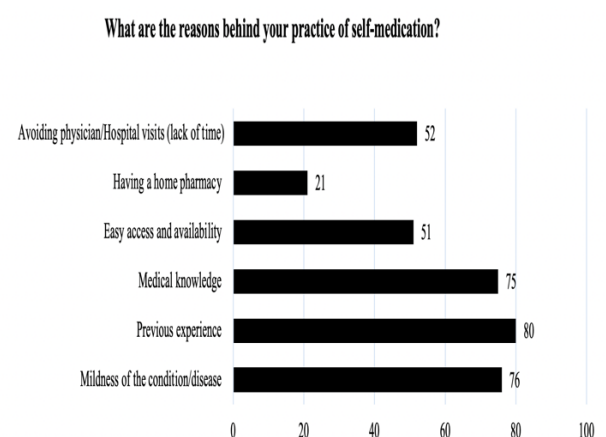


Fig. 2. Reported reasons behind the practice of self-medication.

IV. DISCUSSION

A previous cross-sectional study from Mansoura University, Egypt by [4] showed that the prevalence of self-medication was 62.9%. Younger age, female gender, medical, ever-married students and those having a home pharmacy tended to self-medicate more than their peers with a significant difference between them [4]. Being medical students, or being from urban areas, or carelessness towards health, or even having drugs stored at home pharmacy were independently associated with the likelihood of self-medicating [5]. Similar results were observed in our study regarding common causes of self-medication as well as the groups by which it is most practiced.

Another study conducted on Pharmacy students of Oman Medical College in [5] showed that 94% reported self-medication practices and 36.7% admitted to purchasing medicine without a prescription more than 4 times over the last 6 months [5]. The reported prevalence of practicing self-medication in this study is relatively higher than observed in our study, which could be explained by the different fields of study in this study, which is pharmacy, and ours, which is medicine, and that could be an influential factor in regard to the frequency and the prevalence of self-medication in different schools/colleges as it could encourage individuals to try and practice self-medication due to the relatively larger focus on the knowledge of treatments and medications.

A study conducted in Jordan, by [6], showed that self-medication practice was reported by (1,034, 78.5%) of the students and most common amongst pharmacy students ($n = 369$, 82.9%) compared to Pharm.D. ($n = 357$, 77.9%) and medical students ($n = 308$, 74.4%) ($p = 0.009$) [6]. The relatively higher prevalence of self-medication in pharmacy students is again observed here which suggest the association previously mentioned.

The data from the aforementioned studies as well as other studies display similar prevalence rates among subjects with relatively insignificant discrepancies which shows consistency of our results with others and, more importantly, an emphasis on the existence of this phenomenon in concerning numbers in different parts of the world. However, no similar studies were performed on the same subjects in the College of Medicine at the National University of Sciences and Technology in both campuses of Sohar and Rustaq, Oman. No other similar study was done on medical students in the whole Sultanate of Oman, either. In addition, our study specified results to different cohorts relating to the different phases of study in the College of Medicine (pre-med, pre-clinical and clinical students) which was not noted in most similar studies. The diversity of nationalities and backgrounds of subjects in this study can also make it stand out as the subjects were Omanis or Non-Omanis (33 nationalities are present in the university).

V. CONCLUSION

In conclusion, this study is highly similar to previous studies done on self-medication in Egypt, Iran, Jordan, Iraq and even Oman. The consistency in the results prove that this act is on the rise, and people usually do it due to the mildness of their ailments, previous experiences or their knowledge on drugs and diseases.

Many studies have illustrated the association between acts of self-medication and dependence and addictive disorders [3]. Moreover, self-medication can lead to other known complications, such as overdosing, antimicrobial resistance, drug interactions, and several others [3]. Devoted awareness campaigns and educational sessions on this topic are highly recommended to overcome any possible complications that could arise from self-medication in the near future. Change is possible and it begins from within, and thus, these campaigns could start at higher educational institutions themselves, and the focus can involve the entire society as well.

VI. LIMITATIONS

The majority of the college students are females and thus more female participants were involved when compared to the male students, moreover, the questionnaire was self-administered, and this could lead to underreporting of certain self-medicating practices.

CONFLICTS OF INTERESTS

Authors declare no conflict of interest.

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