

Knowledge, Attitude and Practice of self-medication Among Undergraduate Medical Students in Jeddah city, Saudi Arabia

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Abstract

Background: Self-medication (SM) may be a common habit globally and also the unauthorized use of medication could be a reason for concern. Developing authorization, as a result of improved academic levels and larger access to data, combined with an extreme pursuit of personal health, is leading to a growing demand for direct involvement in health-care decisions. Most medications will have important unwanted side effects and this might result in clinical consequences with potential life threatening complications. The aim of this study is to estimate the prevalence of SM practice of undergraduate medical students listed at Saudi Arabian Medical schools.

Method: A Descriptive/Analytic cross-sectional study was performed, using a survey on a sample of 352 male and female students randomly selected from 2 health programs in Medical schools in Jeddah city, Makkah region, Saudi Arabia in a period of 1 year.

Results: The current study was administered among 352 Pharm. D and MBBS students, of whom a hundred and fifteen (32.7%) were males and 237 (67.3%) were females. We found that 231 (65.6%)

students practiced SM, female participants outnumbering male participants. The prevalence of SM was wide-ranging amongst different years of scholars, the prevalence increasing from the initial to the final year. The knowledge of usage came from medical textbooks by sixty-one (26.4%) of students. Among the self-medicators, the bulk used Non-prescription over-the-counter medicine, 134 (58%).

Conclusion: SM was quite common among undergraduate medical students, due to straightforward accessibility of medicines and data from text books. A number of the scholars showed inadequate information and inappropriate regard toward some points concerning self-medication. Practice of SM is alarming. Medication distribution should be coordinated by the Saudi health care professionals through instituting precautionary and interventional policies; so that correct use of medicines is accomplished.

Key words: Self-medication, Undergraduate Medical Students, Drugs, Clinical pharmacy

Introduction

Self-medication (SM) is a universal problem. It is existing in all ages, although its degree varies across cultures and countries. Once self medication was never used but it has now become a crucial facet of self care. [1]. Self medication is not recommended due to the possibility of adverse drug reactions or medication-related issues. The price may also be an issue, in consideration of the cost of treatment and hospital admission [2,3,4]. SM could be a common global practice universal and the illegal use of medication could be a concern. It is highlighted because the use of treatment by a patient is on their own initiative or on the recommendation of a chemist or a lay person rather than through consulting a professional. Research shows there is incontestable augmented SM use from a range of totally dissimilar countries. The practice of SM is globally widespread currently, particularly in developing countries where numerous medications are distributed over-the-counter while not prescribed [5]. However, prevalence values being reported to be approximately 4-75% in Asia, which is a huge value. [6] The occurrence of SM among undergraduate medical students is very high in Pakistan [7]. The high availability of pharmaceutical products recently, improved access to drugs; quality of health-care, the augmented potential to manage diseases through self-care; and economic, political and cultural factors have contributed to the expansion of SM globally. Compared to the general public, there are several aspects that increase practice of SM amongst undergraduate medical students like simple availability of medicine, advertising of drug makers, earlier experience with symptoms or illness [5]. Accuracy regarding correct drug information, home-kept pharmaceuticals [8] and simple access to information increases the problem. There is a developing situation, ensuing from improved academic levels and larger access to information, combined with increased focus on individual health, which is leading to growing demand for direct participation in health-care choices. SM is related to several adverse issues such as incorrect self-diagnosis, inadequate treatment of an illness, all of which might lead to advancement of illness and complications. Most medication has important unwanted effects. This could lead to serious clinical problems with potentially serious complications. Consequently, the diagnosis by the medical practitioner is vital for the right treatment. Clinical Pharmacy and medicine students are expected to be more knowledgeable relating to rational use of medicines as compared to the overall public and are expected to be more knowledgeable relating to rational use of medicines as compared to the overall public. In keeping with the WHO recommendations, participation of consumers in health regulation is very important for drug regulation and this is supported in most developed countries like the USA and Canada. [9] Despite the prevalence of SM practice among people in the Kingdom of Saudi Arabia, few comprehensive studies have been conducted to assess this practice. As very little information is available regarding SM practice between undergraduate medical students, the goal of our study was to evaluate the prevalence, attitudes, determinants, and sources of

SM among Jeddah medical and nonmedical students. The aim of this study is to estimate the prevalence of SM practices of healthy undergraduate students registered at Medical schools in Jeddah city to inform and update future academic efforts on drug misapprehensions so as to inspire harmless medication practices amongst incoming undergraduate medical students as well as to assess the frequency of SM for many unremarkably occurring medical conditions and take into account the possible role of the clinical chemist or physicians in SM use.

Methods

Design: A Descriptive/Analytic cross-sectional study was performed, using the questionnaire on a sample of 352 male and female students randomly selected from two health programs at Ibn Sina National college for medical studies (ISNC), Jeddah, Saudi Arabia.

Analysis: Data Analysis was performed by the statistical team using SPSS program (version 16). The means and standard deviations of normally distributed variables were compared using paired t tests and for categorical variables, the X² test was used. The p-value of less than 0.05 was considered to be a statistically significant difference.

Participants: Undergraduate medical students enrolled at Medical colleges in Jeddah city who voluntarily agreed to participate in the online survey.

Survey Instrument: Randomly chosen consenting participants were requested to answer a 16 items self-structured online form. It was initially directed to 12 undergraduate medical students of our college and pilot tested. Appropriate adjustments were then prepared before confirming it for the research. The survey included items to collect information on demography, frequently used self-medications, prevalence and forms of self-medications. Undergraduate medical Students were assured about the privacy of their answers. Meanwhile knowledge of medications improves as we develop. The survey contained questions about sociodemographic, education, clinical information, history and pattern of doctor visits, students' beliefs and knowledge about the OTC intake and prescribed drugs, reasons for the self-prescribed habit, knowledge source, and recurrent indications boosting self-medication. Some questions had more than 1 answer. The survey was settled after an inclusive evaluation of the related articles and discussion between the research group. It was face-validated via discussion with specialists in the field and was furthermore objectively validated for clarity.

Implications of results:

Results will be used in educational awareness provision and interventions for incoming undergraduate medical students to encourage harmless medication practices.

Results

Table 1: Prevalence of SM based on Specialty

	Self-medication	
	Yes	No
Medicine	163	75
	30%	14%
Pharm. D.	162	82
	30%	15%
Dentistry	29	13
	5%	2%
Nursing	8	6
	0,4871 %	0,1151 %

Table 2: Frequency of self-medication

	Total Number	%	male		female	
No self-medication	11	3%	5	45%	6	55%
Rarely (Once a month)	211	58%,3	54	26%	157	74%
Often (Once every two weeks)	92	25%,4	27	29%	65	71%
Frequently (Once a week)	27	7%,5	10	37%	17	63%
Very frequently (more than once a week)	21	5%,8	5	24%	16	76%

Table 3: Illnesses for which SM was used

	Total Number	%	male		female	
Headache, fever and pain, Dysmenorrhea	107	30%	31	29%	76	71%
Cold and Flu	82	23%	31	38%	51	62%
Insomnia/ Anxiety	7	2%	2	29%	5	71%
Allergy (eye, skin, nose)	37	10%	10	27%	27	73%
Gastric symptoms (Diarrhea/ constipation/ Vomiting /indigestion)	29	8%	5	17%	24	83%
Respiratory symptoms (Sore throat, cough, epistaxis)	12	3%	3	25%	9	75%
Skin infection	7	2%	1	14%	6	86%
None	81	22%	18	22%	63	78%

Table 4: Types of SM used for illnesses

	Total Number	%	male		female	
Analgesics/Antipyretics (Paracetamol/NSAIDs)	199	55%	55	28%	144	72%
Antibiotics (Amoxicillin, Cefixime)	26	7%,2	6	23%	20	77%
Cough and Flu (Pseudoephedrine)	60	16%,6	17	28%	43	72%
(Lactulose)	10	2%,8	3	30%	7	70%
Anti-histamines (Loratadine, Cetirizine)	43	11%,90	4	9%	39	91%
Multivitamins	20	0%,55	3	15%	17	85%
CNC	4	1%,10	1	25%	3	75%

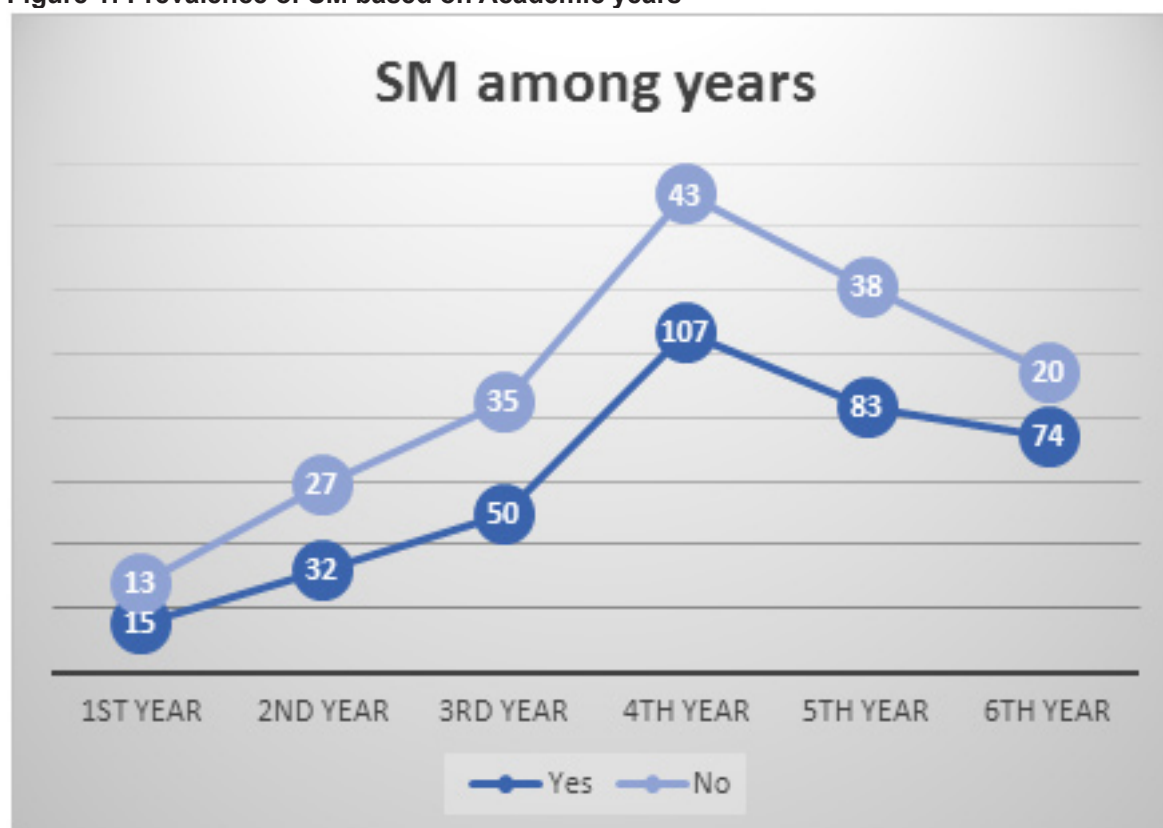
Table 5: View of students regarding Self Medications

	Total Number	%	male	female
I am always in favor of SM practice	110	20%,4	31 28%	79 72%
I am against SM but it can be used in rare situations	382	71%,0	99 26%	283 74%
I am always against self-medication practice	46	8%,6	15 33%	31 67%

Table 6: Reason in favor of SM practice

	Total Number	%	male	female
Emergency use	157	29%,20	40 25%	117 75%
Previous experience	168	31%,20	45 27%	123 73%
Saving doctor consultation time	52	9%,70	14 27%	38 73%
Lack of trust in prescribers	8	1%,50	4 50%	4 50%
Self-knowledge is enough to self-medicate rationally	125	23%,20	33 26%	92 74%
Informed by elders/family members and friends	28	5%,20	9 32%	19 68%

Figure 1: Prevalence of SM based on Academic years



Ac. Year	%
1ST	5%
2ND	11%
3RD	16%
4TH	28%
5TH	22%
6TH	18%

Figure 2: Frequency of self-medication

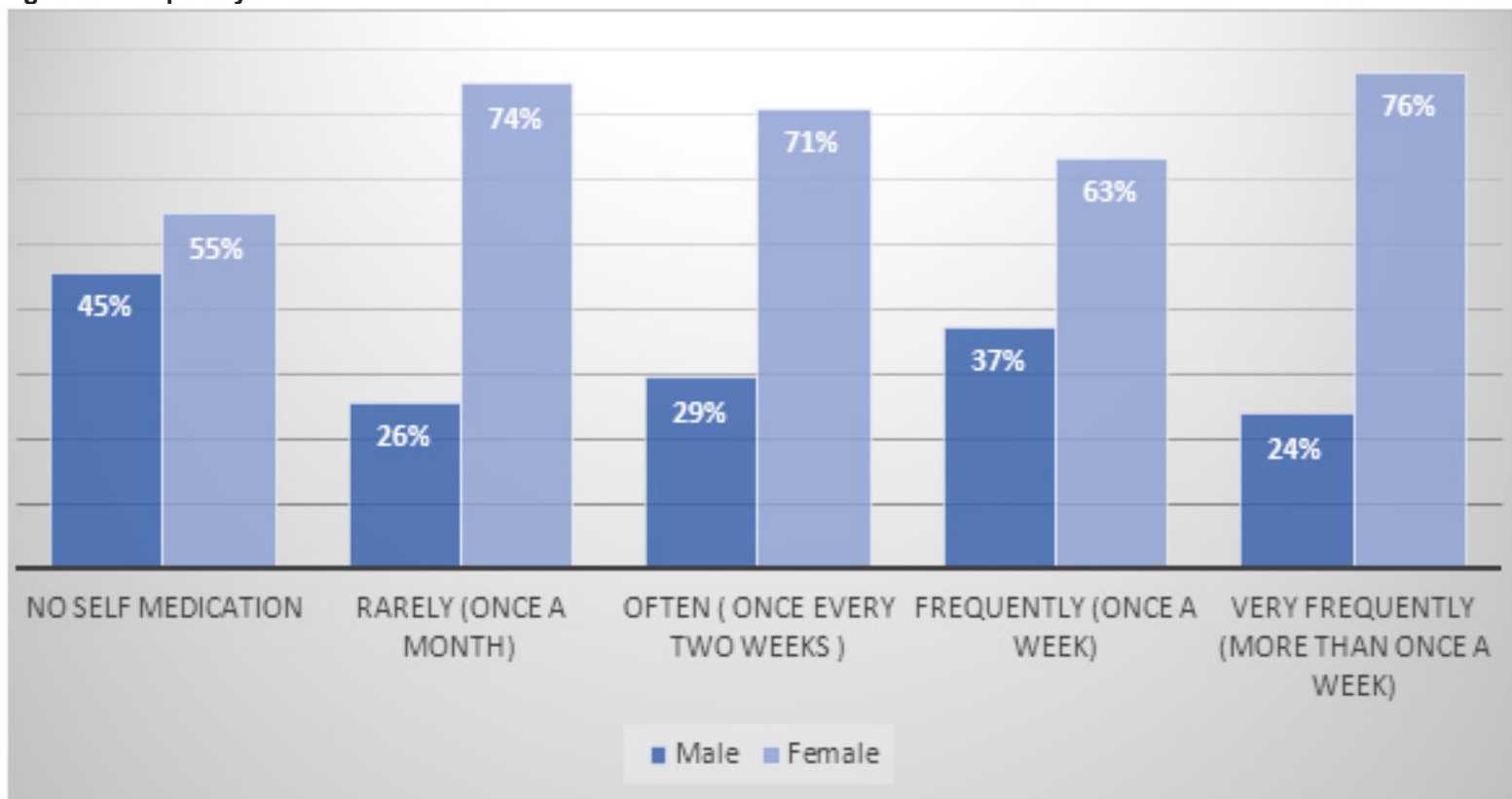


Figure 3: Illnesses for which SM were used

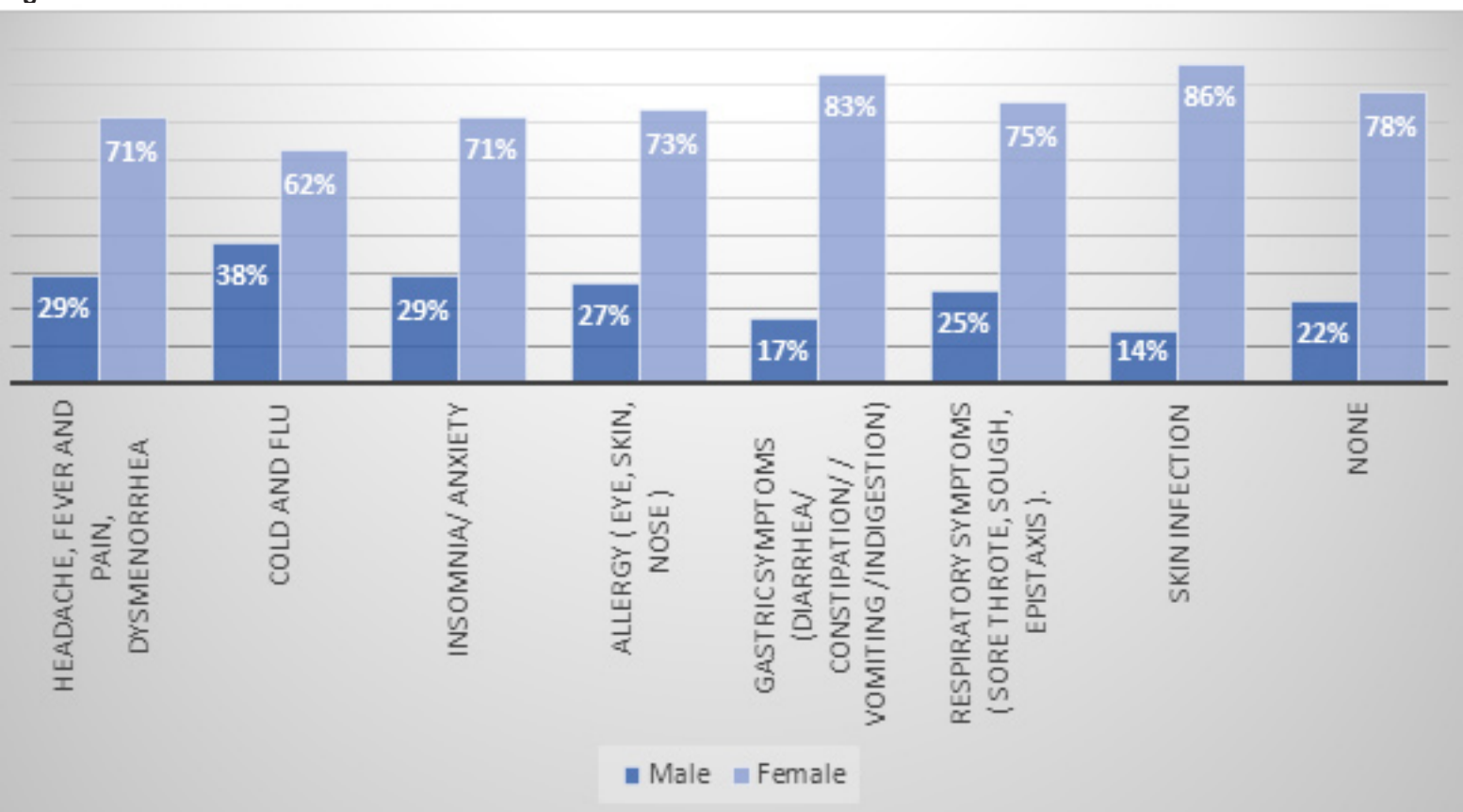


Figure 4: Reason in favor of Self-medication practice

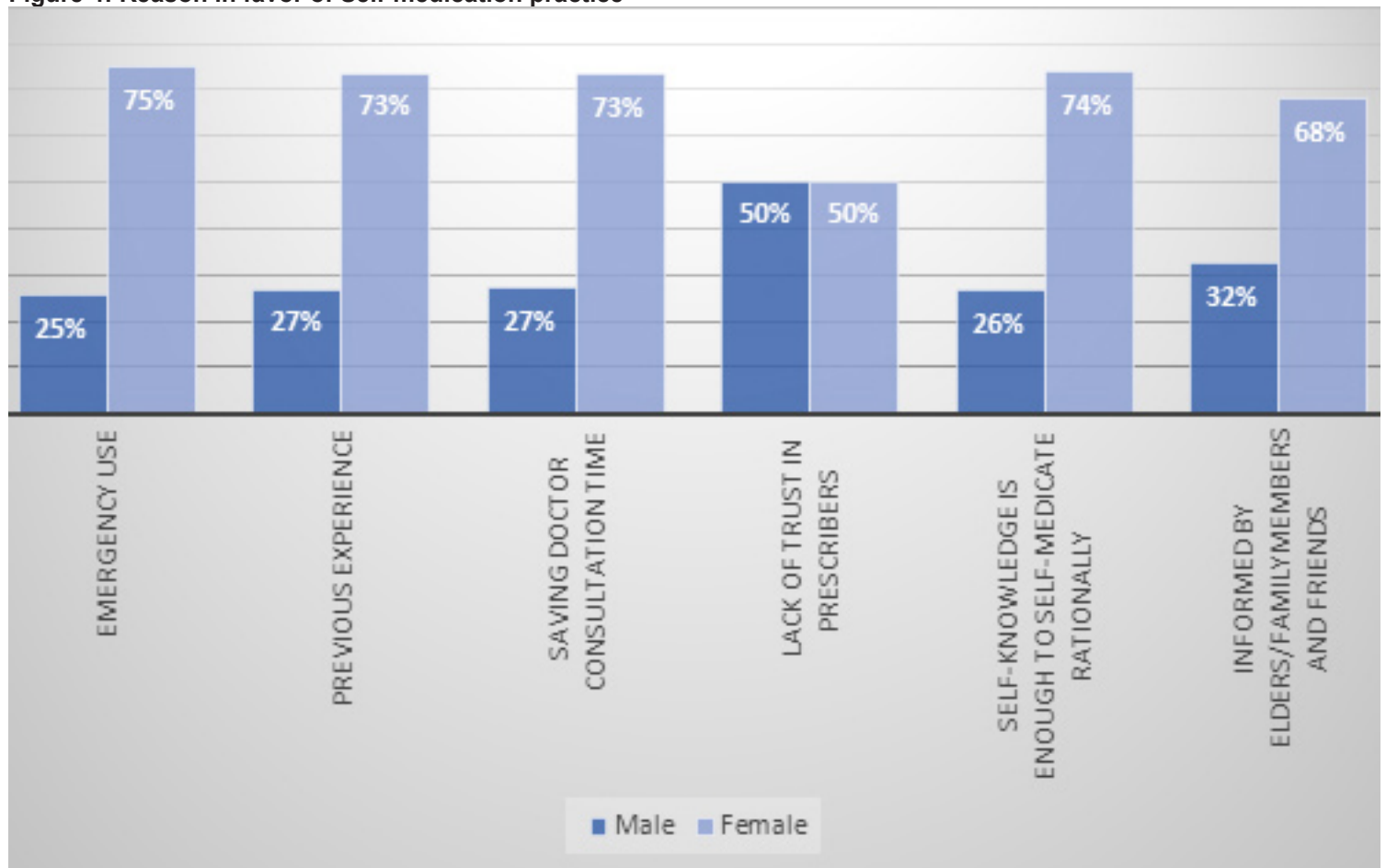


Figure 5: Illnesses for which Self-medication was used

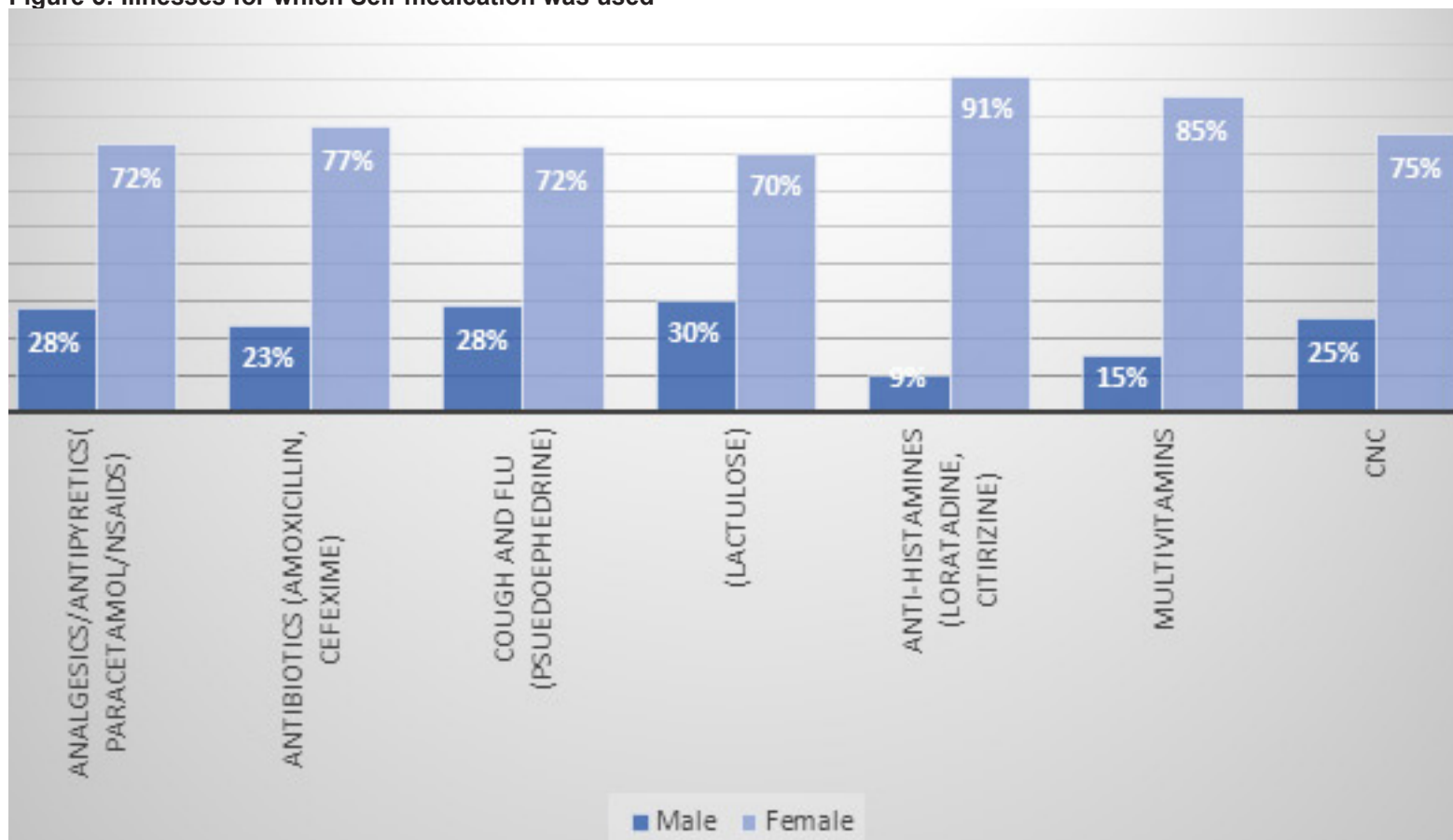
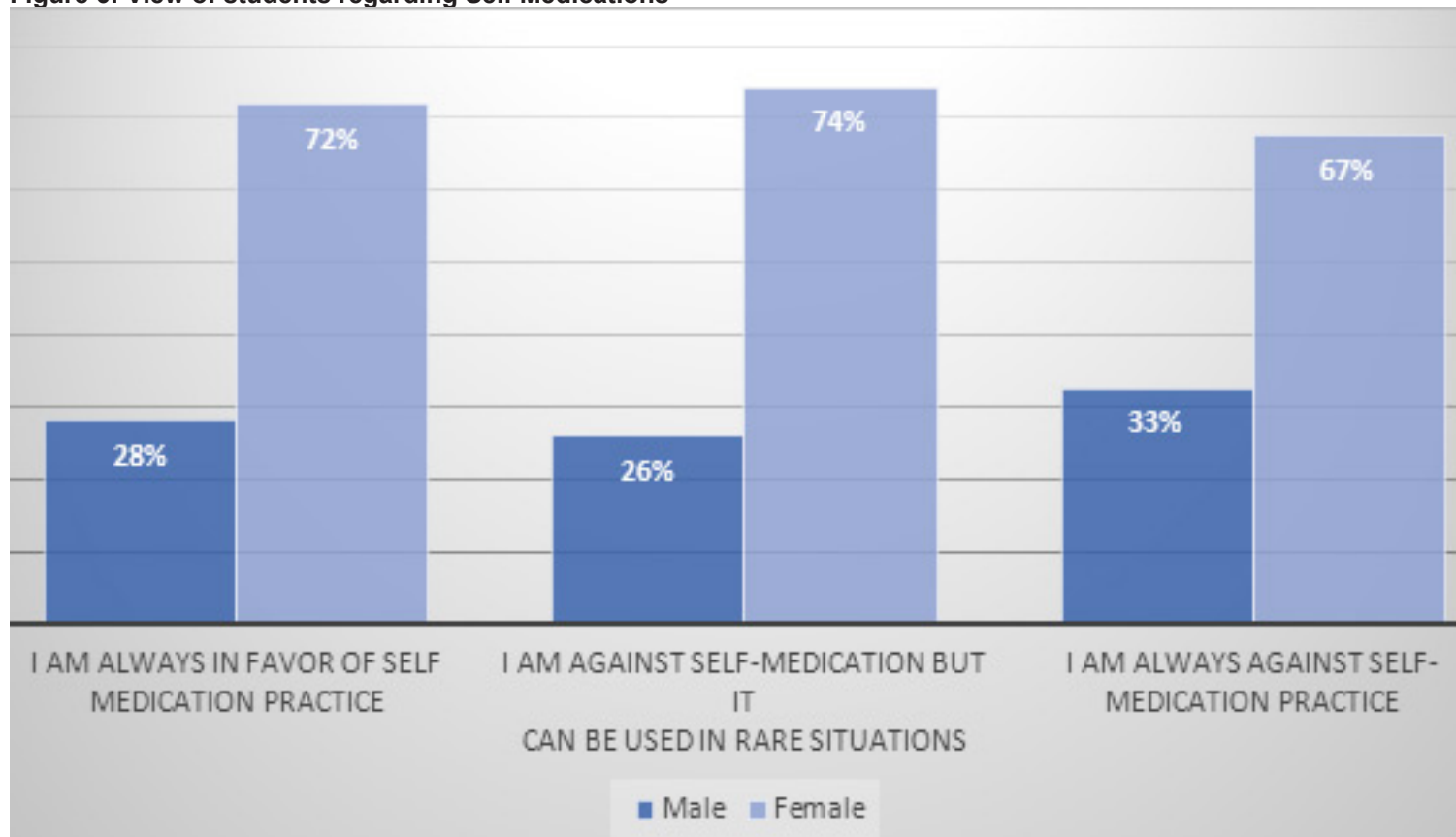


Figure 6: View of students regarding Self Medications

Discussion

This study evaluated knowledge, practice and attitude of SM between undergraduate medical students and revealed that SM practice is very common amongst undergraduate medical students. In our study, a total of 352 medical students participated, of whom 115 (32.7%) were males and 237 (67.3%) were females. We have noted that the majority of students with overall prevalence of SM is 67.3% which was similar to the prevalence (63.7%) stated among medical students (plus interns) in Kahramanmaraş, Turkey and greater than the prevalence (55.2%) reported from Egypt. The prevalence of SM amongst college students fluctuated from 38.5% in Ethiopia [10] to 98% in Palestine [11]. A meta-analysis of 27 articles of SM amongst doctors and medical students stated SM prevalence of >50% in 76% of the articles [12]. In Jordan, previous research conducted on medication use was focused on medical students [13] or community, [14], [15] with special consideration to the use of antimicrobial medications [16-18]. The students' general knowledge and attitude of SM in the current research was reassuring. The results were significantly higher amongst fourth year students compared to other academic years. SM, when implemented properly, can be more appropriate, may alleviate acute pain, and lower treatment cost and doctor communication periods [19]. Nevertheless, it can threaten individual health and result in severe complications when applied improperly, such as practicing SM by using prescription-only medications [20]. For example, developing medication resistance is of huge concern with the recurrent and incorrect use of antibiotics that could be accessible without a prescription. A study conducted

among Jordanian families stated that 39.5% of the applicants had used antibiotics without prescription [21]. Other grave consequences that might be triggered with repeated use of OTC drugs include incorrect dosing, treatment duplication, medications interaction, treatment failure, covering of health problems and symptoms, and delay in prescribing the proper medication [22]. Undergraduate Medical students who were trained by doctors may think themselves in a comfortable situation consuming prescription-only medication as likened to undergraduate pharmacy students since they are inbuilt with a prescribing ability. The teaching in clinical pharmacy and medicine at colleges begins when the students have improved from the preparatory year into the second year. As the students' progress in their instructive profession, they become more well-read and knowledgeable about the phenomenon. Specialized education may encourage their perception of SM practice and consume prescription-only medication. The prevalence of SM is wide-ranging among different academic years, the prevalence growing from preliminary to final academic years as shown in Figure 1. Therefore, our study found that the number of students self-medicating with prescription-only medication decreased as they progressed in their instructive profession [23]. The most used source of information was medical texts by (26.4%) students. In another preceding study in Nepal among paramedical and medical students, 60.3% used the pharmacist as a basis of evidence which is greater than that stated in our study. In our study, 26.4% of respondents stated that they use medical books as a source of information. In Egypt, a study revealed that neighbors and households, own choice, and Internet were common resources for SM information among students [24]

Another study stated that colleagues and household, chemist, and Internet were the primary 3 resources of SM among undergraduate medical students in Nepal [25]. Other reasons for the elevated prevalence of SM in this study might include ease, and lack of time to seek GP appointment. Among the self-medicators, the bulk used Non-prescription OTC medications, 134 (58%). The US Food And Drug Administration describes over-the-counter (OTC) drugs as “medications that are safe and effective for use by the general public without seeking treatment by a health professional”[26]. A previous article revealed that the reasons behind the prevalent consuming of OTC drugs may include the following: the wish to save money, occurrence of insignificant health illnesses that do not need a call on the doctor, previous practice with medication efficacy, and the lengthy waiting time at hospitals. [27] A significant number of undergraduate medical students advised that they were against the SM habit, in belief, but asserted that SM might be used under certain conditions. This was a novel outcome as earlier studies conducted amongst the equivalent population stated that most of the students of Taibah University (87%) and Jazan University (52.6%) were absolutely against the habit [28,29].

Limitations

The study was built on self-reported information about self-medication in the past 1 year hence bias can't be ruled out. The study didn't include how many students have doctors in their household so their impact as a source of prescription can't be ruled out.

Conclusion

From our study, we conclude that SM was quite common among undergraduate medical students, which may be due to easy accessibility of medications and information from texts. Certain students revealed insufficient knowledge and wrong attitude concerning some points about SM. Practice of SM is disturbing. Developing understanding about the responsibility of the pharmacist as a medication advisor for cautious use of drugs obtainable for SM would be strongly suggested. The distributing of drug has to be meticulous by Saudi health care authorities to provide effective precautionary and interventional policies; thereby, proper usage of drugs is accomplished.

Conflict of Interest

Authors have no conflict of interest.

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