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ASSESSMENT OF PREVELANCE OF SELF MEDICATION AMONG PHARMACY STUDENTS

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ABSTRACT

BACKGROUND: Self-medication has been defined as the use of medication (modern and/or traditional) for self-treatment without consulting a physician either for diagnosis, prescription, or surveillance of treatment. Self-medication practice offers ease of access to OTC medications at a lower cost, which serves as an alternative to the costly and time-consuming clinical consultations. Safety issues are a major concern as many diseases have similar symptoms. Many studies have revealed that young adults are more vulnerable to the practice of self-medication due to their low perception of risk associated with the use of drugs, knowledge of drugs, easy access to Internet, wider media coverage on related health issues, ready access to drugs, level of education, and social status. Self-medication is significant among the pharmacy students as they are the future custodians of medicines and have a potential role in counselling the patients about the disadvantages and other implications associated with drugs. **METHODOLOGY:** A prospective observational cross sectional study was conducted in a Pharmacy college located in South India with a sample size of 568. A structured data collection form was used to collect information on demographic parameters including age and sex, accommodation, year of the degree/ PG program, drugs being used as self-medication and it was then analyzed. **RESULTS:** In the present study 87% of the participants were females. The main source for obtaining medicines was the pharmacy. Alarmingly, about one third of the respondents obtained antibiotics for self-medication without a prescription despite the fact that they were aware of the risk of development of bacterial resistance. The main reasons for self-medication include health problem being not serious, the illness is minor, to get quick relief of the condition and to avoid long waiting at clinics. The most common types of self-medications used by participants include analgesics, vitamins and minerals, antihistamines, etc.

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INTRODUCTION

Self-medication has been defined as the use of medication (modern and/or traditional) for self-treatment without consulting a physician either for diagnosis, prescription, or surveillance of treatment^[1]. It involves obtaining medication without prescription and taking medicines on advice of and from friends and relatives. Self-medication is common in both developed and developing countries but higher in developing countries, due to wider increase of drug availability without prescription^[2].

The International Pharmaceutical Federation (FIP) defines self-medication as the use of non-prescription medicines by people on their own initiative^[3]. As per the WHO 'Self-medication is the selection and use of medicines by individuals to treat self-recognized illnesses or symptoms^[4]. As per WHO guidelines "responsible self-medication can help prevent and treat diseases that do not require medical consultation and reduce the increasing pressure on medical services for relief of minor ailments especially when resources are limited"^[5].

Self-medication practice offers ease of access to OTC medications at a lower cost, which serves as an alternative to the costly and time-consuming clinical consultations. Safety issues are a major concern as many diseases have similar symptoms. Additionally, the risk of self-medication is increased if the individual does not have knowledge and understanding of the disease. Additionally, this practice is associated with an increased risk of misdiagnosis, ADRs, drug abuse and misuse^[6].

The World Health Organization (WHO) emphasized that self-medication must be correctly taught and controlled in order to avoid drug-related issues such as antimicrobial resistance which is now a current problem worldwide particularly in developing countries where antibiotics are often available without a prescription^[7]. Many studies have revealed that young adults are more vulnerable to the practice of self-medication due to their low perception of risk associated with the use of drugs, knowledge of drugs, easy access to Internet, wider media coverage on related health issues, ready access to drugs, level of education, and social status^[8-10].

There are several factors that may contribute to self-medication practice. One of the most important reasons is having knowledge about medicines' use. Physicians and students who involve in health-related courses have more tendencies to practice self-medication^[11]. Even for people without health education background, they might practice self-medication as it is easy to acquire basic health information from the internet or people around them such as relatives or physicians. Another reason that was found to contribute to self-medication practice is getting a mild illness^[12]. In such cases, patients tend to skip physician's visits and seek OTC medicines to resolve their symptoms. Recurrent mild illness is one more reason to think of self-medication^[13].

Self-medication is significant among the pharmacy students as they are the future custodians of medicines and have a potential role in counselling the patients about the disadvantages and other implications associated with drugs. Pharmacy students also differ from the general population based on their acquired knowledge of drugs and diseases. However, it has been shown that pharmacists are the most commonly implicated in self-medication due to easy access to medication, knowledge of use and self-diagnosis^[14].

OBJECTIVE:

To assess self-medication practices among the pharmacy students in a private university. It also aimed at estimating the prevalence of self-medication in the study population.

METHODOLOGY

A prospective observational cross sectional study was conducted in a Pharmacy college located in South India with a sample size of 568. Relevant information was collected according to the approved pre-designed drug interaction collection form including subject demographics, commonly used OTC or other prescription medications, duration of use, indications of use as well as assessment of their knowledge on the antibiotic resistance, sideeffects of prolonged therapy.

Data was then statistically analyzed using Microsoft excel.

Inclusion criteria

All population taking any drug without being prescribed by the clinician of both gender without any age restriction.

Exclusion criteria

Subjects with incomplete data.

Procedure

A structured data collection form was used to collect information on demographic parameters including age and sex, accommodation, year of the degree/ PG program, drugs being used as self-medication and a set of questioners to assess the knowledge of the subjects regarding use of self-medications.

Data Analysis:

The data was entered in Microsoft Excel 2010 and the results were analysed as tabular form and percentages. t-test was used to determine the significant difference between quantitative variables.

OBSERVATIONS

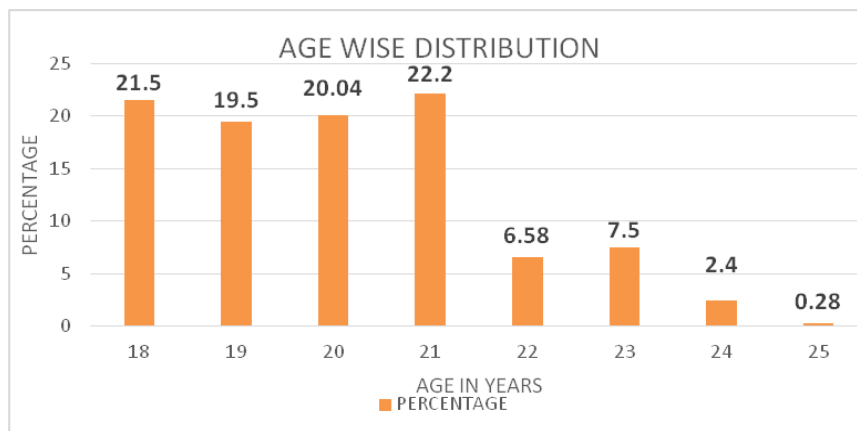


Figure 1 : Age Wise Distribution.

Figure 1 illustrates that Among 409 subjects enrolled, 22.2% belong to the age of 21, 21.5% belong to 18 years, 20.04% belong to 18years, 19.5% of age 19, 7.5% of age 23 years followed by 6.58%, 2.4%, and 0.28% of ages 22, 24 and 25 respectively.

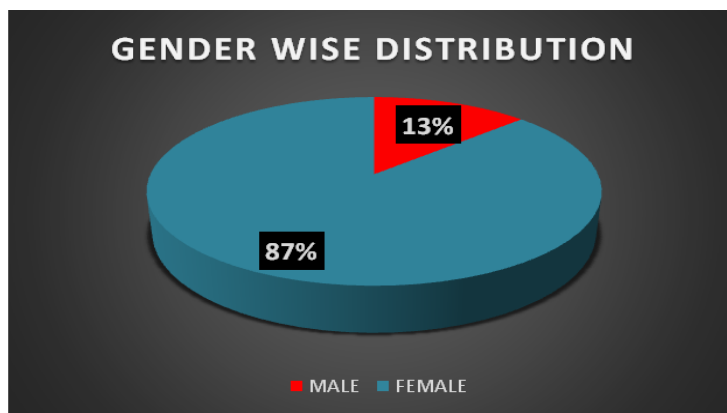


Figure 2 : Gender Wise Distribution.

Figure 2 shows that from 409 subjects participated, majority were females I.e 86.70%, followed by 13.20 % of males.

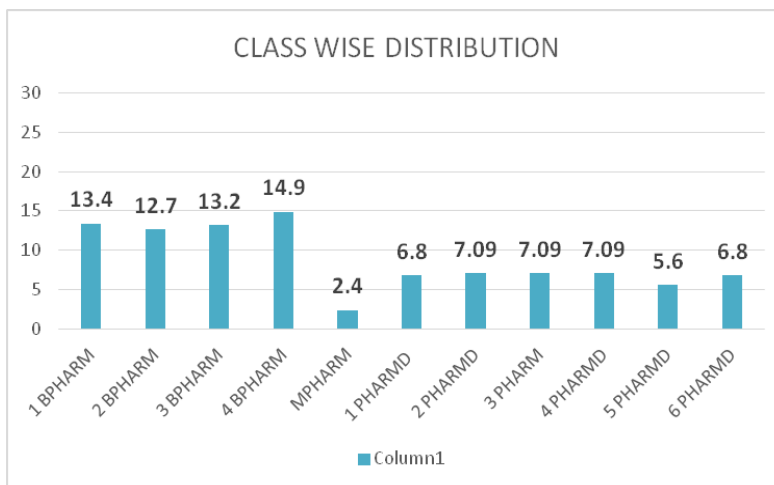


Figure 3 : Classwise Distribution.

Figure 3 illustrates that from 409 subjects participated, 14.9% were of class 4th Bpharm, 13.4% of 1st B Pharm students, 13.2% of 3rd B Pharm, 12.7% of 2nd B Pharm students, 7.09% each of 2nd Pharm D, 3rd Pharm D, and 4th Pharm D, followed by 6.8% of 1st Pharm D and 6th Pharm D and 5.6% of 5th Pharm D.

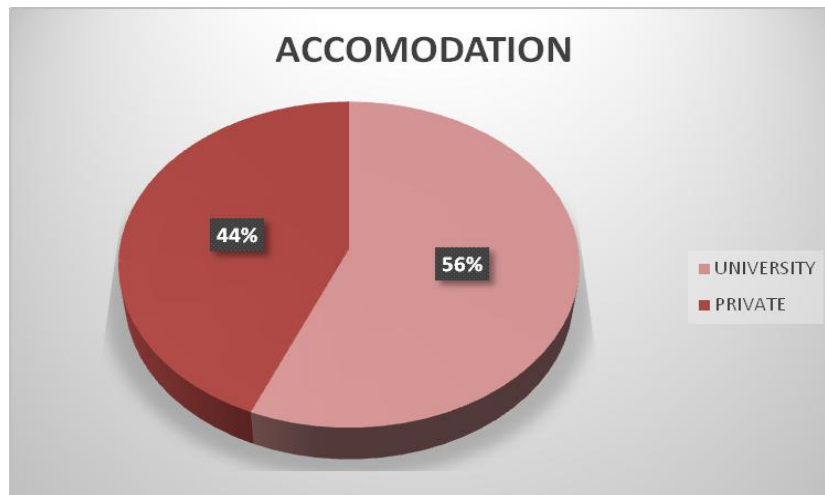


Figure 4: Accomodation Of The Study Group.

Figure 4 illustrates the accomodation among the subjects participated, 56.3% have university accomodation followed by 43.5% of private accomodation.

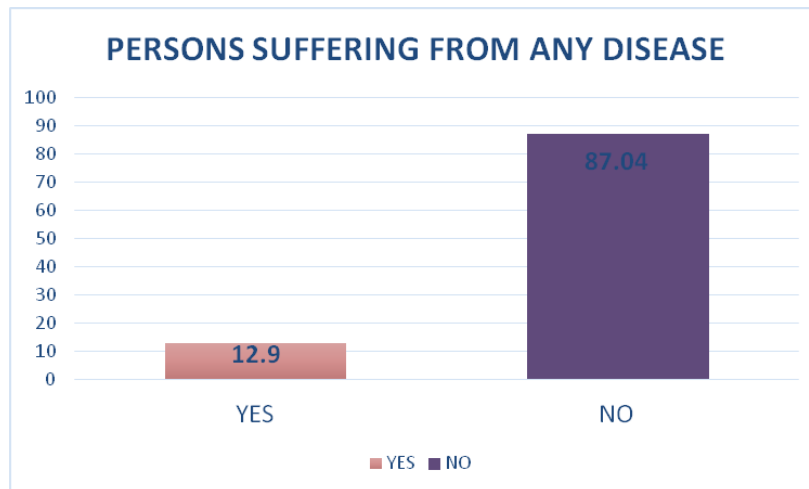


Figure 5 : Persons Suffering From Any Disease.

Figure 5 illustrates that majority of the subjects that is 87.04% have no disease and 12.9% are with disease.

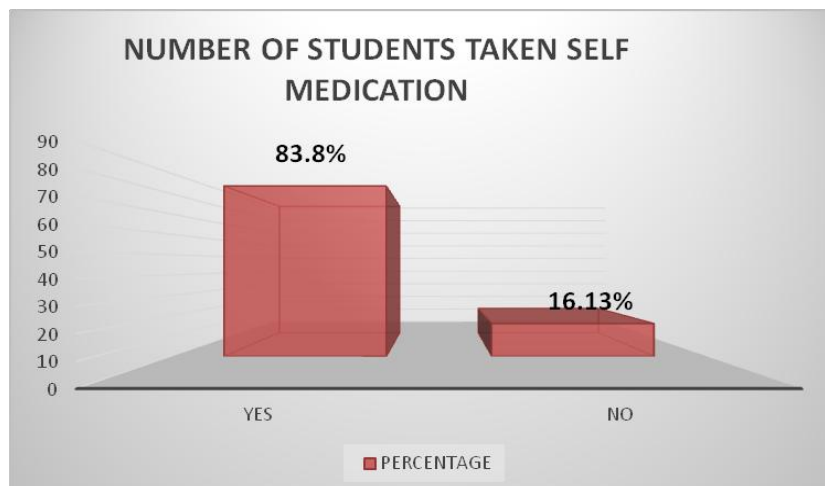


Figure 6 : Number Of Students Taken Self Medication.

Figure 6 illustrates that 83.8% of the subjects have taken self medication, 16.13% had'nt taken any.

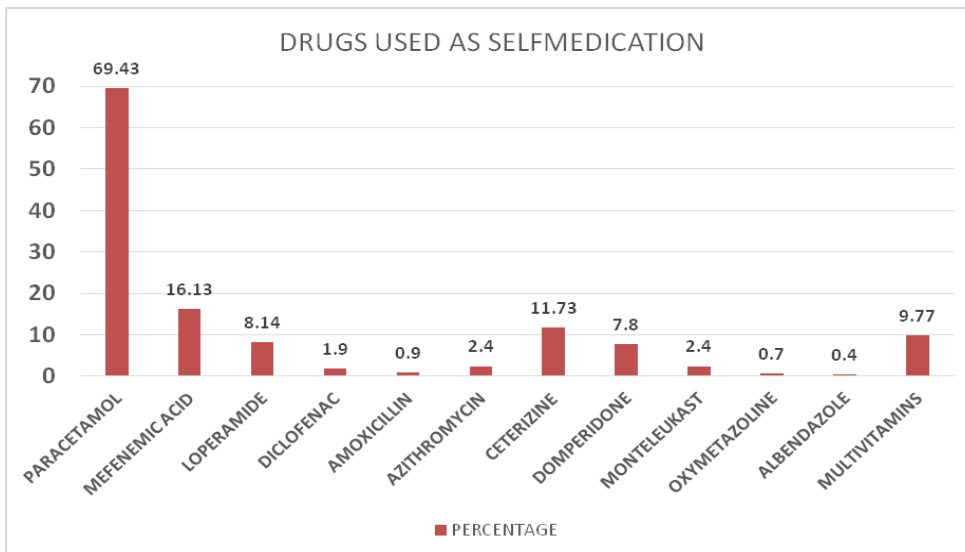


Figure 7 : Drugs Used As Self Medication.

Figure 7 shows that among 409 subjects 69.43% of them used paracetamol, 16.13% of mefenamic acid, 11.73% of cetirizine, 9.77% with multivitamin, 8.14% with loperamide, 2.4% each with azithromycin and montelukast, 1.9% with diclofenac, 0.9% with amoxicillin, 0.7% with oxymetazoline, and 0.4% with albendazole.

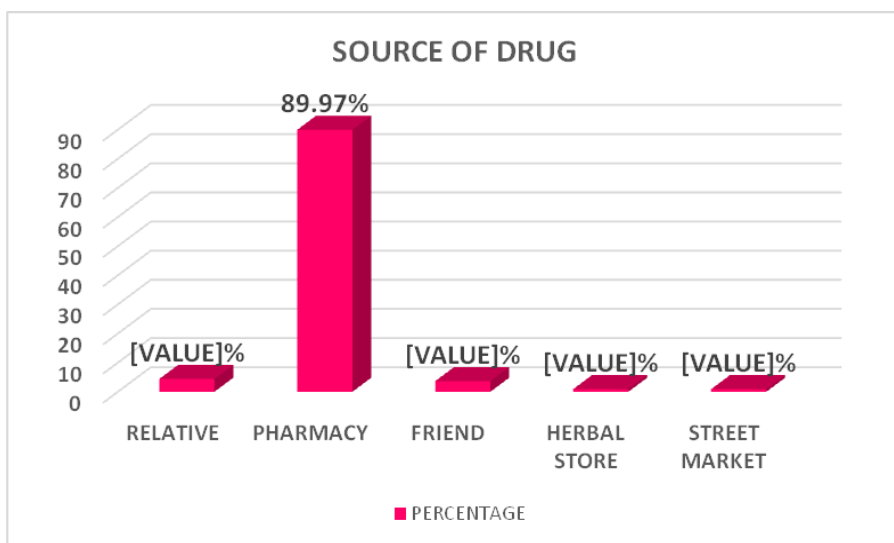


Figure 8 : Source Of Drug.

Figure 8 shows that 89.97% of subjects receive drugs from pharmacy, 4.4% from relatives, 3.66% from friends, 0.9% each from herbal and street market.

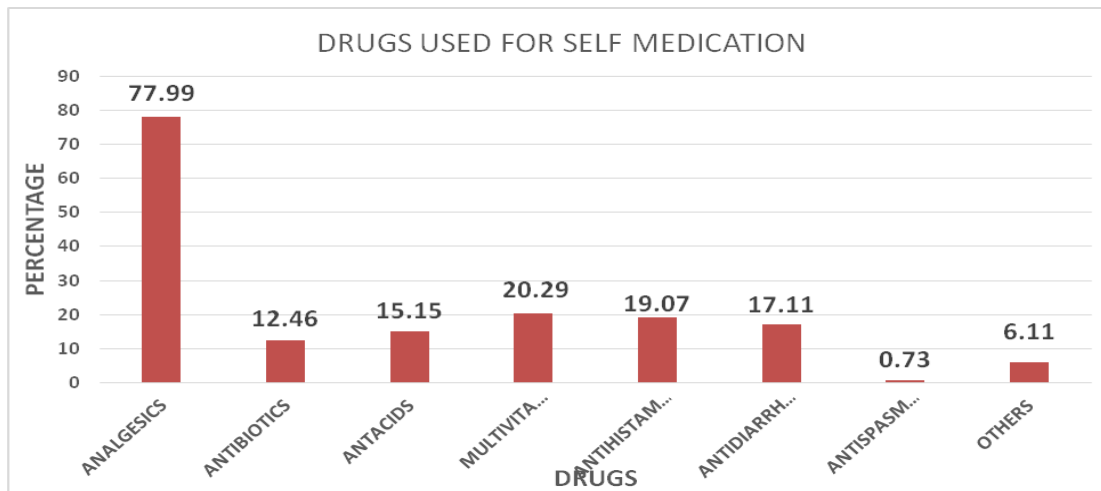


Figure 9 : Drugs Used For Self Medication.

Figure 9 illustrates that 77.99% of the subjects use analgesics, 20.29% use multivitamins, 19.07% use antihistamines, 17.11% with antidiarrheals, 15.15% with antacids, 12.46% with antibiotics, 0.73% with antispasmodics, and 6.11% with drugs.

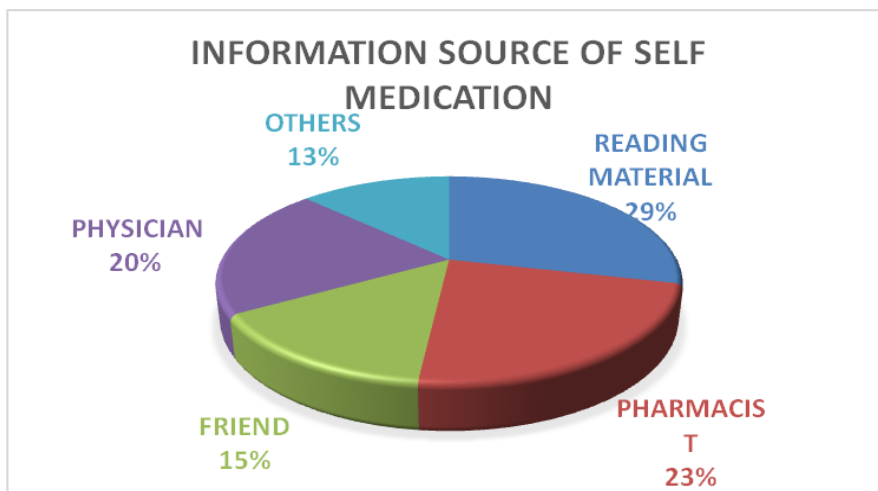


Figure 10 : Information Source Of Self Medication.

Figure 10 shows that majority of the study subjects receive information from reading materials that is 29.82% , 23.96% from pharmacist , 21.5% from physician/nurse but without prescription , 15.4% and 13.2% from friend and other source of information respectively.

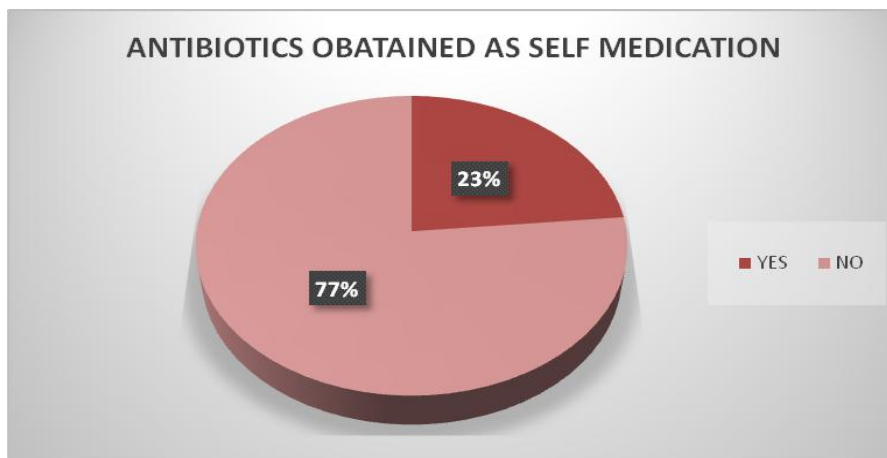


Figure 11 : Antibiotics Obtained As Self Medication.

Figure 11 shows that majority of the study subjects (76.52%) responded that antibiotics cannot be used as self medication, followed by 23.47% with the response that it can be obtained as self medication.

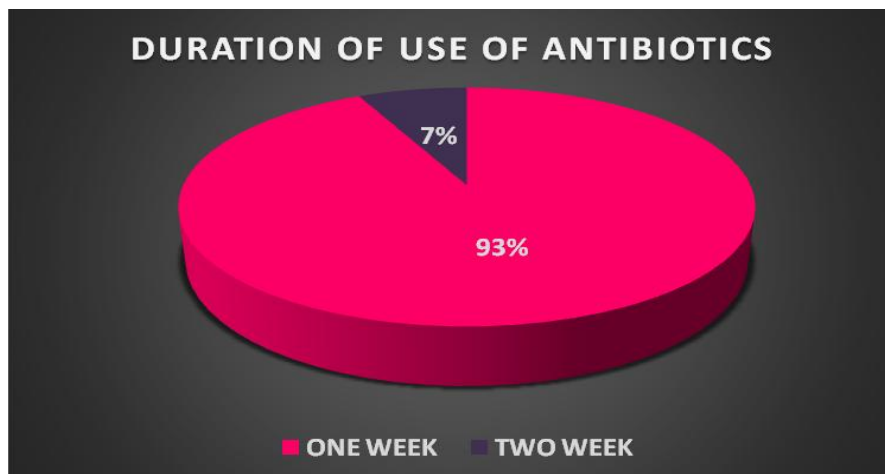


Figure 12 : Duration Of Use Of Antibiotics.

Figure 12 shows that 92.7% of the subjects use antibiotic for one week, and 7.29% for two weeks.

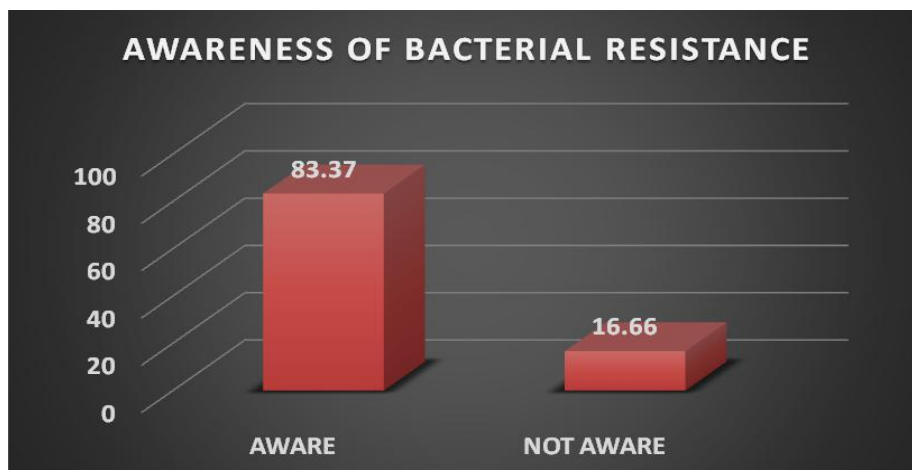


Figure 13 : Awareness Of Bacterial Resisitance.

Figure13 shows that 83.37% of the subjects are aware of bacterial resistance and 16.66% are not aware of it.

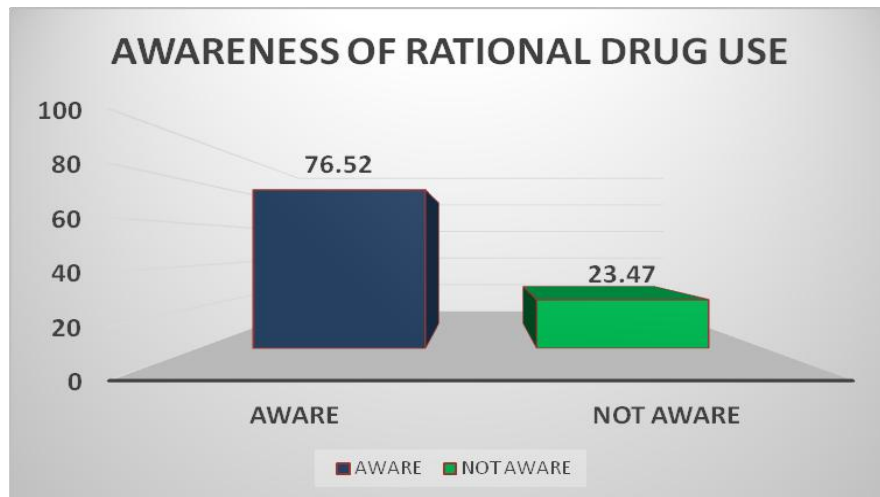


Figure 14 : Awareness Of Rational Drug Use.

Figure 14 shows that 76.52% of the study subjects are aware of the rational drug use and 23.47% are not aware of it.

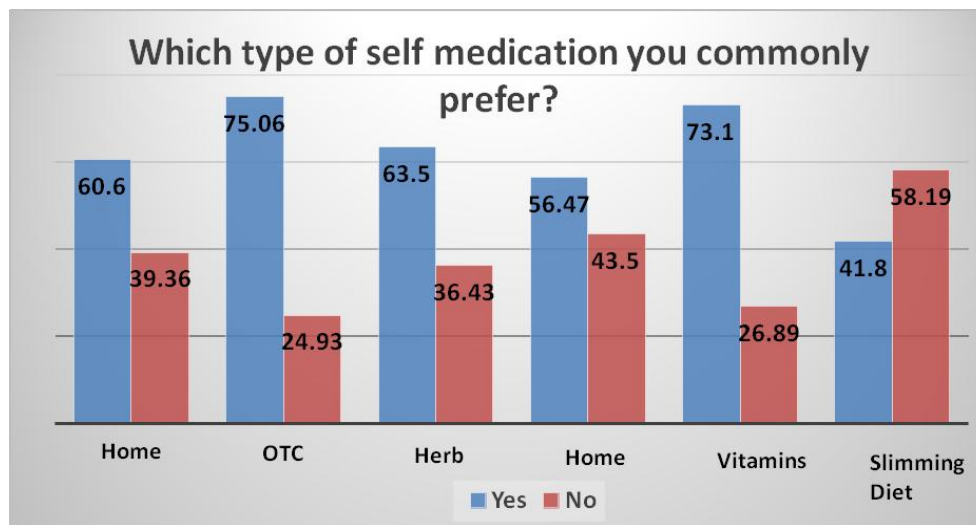


Figure 15 : Type Of Self Medication Commonly Preferred.

Figure 15 shows that 60.6% prefer home pharmacy and 39.36% doesn't prefer it, 75.06% prefer OTC and 24.93% doesnot,63.5% prefer herbs and 36.43% doesnot,56.47% prefer homeopathy and 43.5% doesnot, 73.1% prefer vitamins and 26.89% doesnot, 41.8% prefer slimming diet and 58.19% doesnot prefer it.

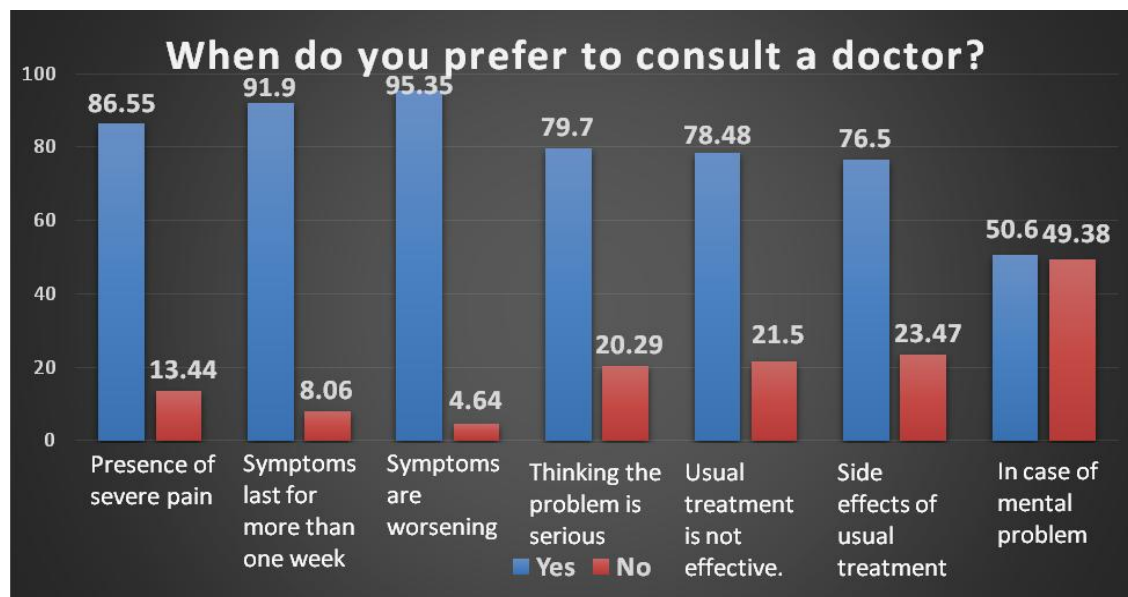


Figure 16: Preference To Consult A Doctor.

Figure 16 illustrates that 95.35% of the study subjects prefer to consult a doctor when the symptoms are worsening whereas 4.64% does not prefer, 91.9% seek consultation when the symptoms last for more than one week and 8.06% does not seek, 86.55% of the subjects consult a doctor in the presence of severe pain whereas 13.44% does not prefer, 79.7% seek consultation while thinking the problem is serious and 20.29% does not, 78.48% consults when the usual treatment is not effective and 21.5% does not, 76.5% consults when there is side effects of usual treatment and 23.47% does not, 50.6% when there is a mental problem and 49.38% does not.

DISCUSSION

People have always been very cautious about their personal health status and for this they have used self-medication, a feature of healthcare, from ancient times. Although self-medication has many pros and cons it depends on who uses it and how it is used for self-treatment^[15]. We focused on pharmacy students because they have adequate knowledge of medicine in theory and are more cautious about the safety of drugs which is lacking in other student groups or in the general population. Thus a pharmacy student's view on the self-medication practice can be considered as a major factor to judge the characteristics of their future prescription pattern.

In our study we found that about 100.0% ie, all the students of our study group self-practice different types of medication. Several research works carried out in other developing countries revealed that the prevalence of self-medication was 38.5% and 43.2% among medical, pharmacy, and health science students in Ethiopia^[15,16], 51% among citizens in Slovenia^[18], 55.3% and 55% among medical students in Pakistan^[19] and Egypt^[20] respectively, 56.9% among medical undergraduate students in Nigeria^[21] and 80.9% among female university students in Malaysia^[22]. The major influential reason behind the higher propensity of self-medication might be the unregulated easy availability of all categories of medicine without prescription.

Abahusain *et al.*^[23] (2005) reported on differences in self-medication between male and female high school students. Since in the present study 87% of the participants were females, no attempts were made to study the gender-based differences, if any, on self-medication frequency.

The main source for obtaining medicines was the pharmacy and only a few respondents obtained their medications from other sources including street market, herbal stores and relatives or friends. It is in accordance with results of earlier studies (James *et al.*, 2006^[24]; Zafar *et al.*, 2008^[19]; Klemenc-Ketis *et al.*, 2010^[25]). Alarmingly, about one third of the respondents obtained antibiotics for self-medication without a prescription despite the fact that they were aware of the risk of development of bacterial resistance. This is similar to the results reported for Jordanian (Sawair *et al.*, 2009^[26]) and Iranian (Sarhroodi *et al.*, 2010^[27]) students. Such a trend is probably due to the fact that like other most prescription drugs, antibiotics can still be obtained without a prescription. This issue requires more attention of both the academic and health authorities in attempts to increase awareness of not only students but also the general public to the rational use of antibiotics.

Results of the present study indicate that in agreement with previous studies (Zafar *et al.*, 2008^[19]; Klemenc-Ketis *et al.*, 2010^[25]; Ghosh *et al.*, 2010^[28]), the main reasons for self-medication include health problem being not serious, the illness is minor, to get quick relief of the condition and to avoid long waiting at clinics. Similarly, our results for reasons against self-medication were in agreement with those reported for university students in other countries (James *et al.*, 2006^[24]; Sontakke *et al.*, 2011^[29];). Risks of adverse effects and using wrong medication were ranked as the main reasons deterring respondents from practicing self-medication while risks of misdiagnosing the condition, drug interaction and drug abuse and dependence were ranked second.

The most common types of self-medications used by participants include analgesics, vitamins and minerals, antihistamines, antacids, laxatives, anti-diarrheal and anti-emetics. This is in accordance with a similar study conducted by Suleiman Ibrahim Sharif *et al.*, 2012^[30].

CONCLUSION

The prevalence of self-medication among pharmacy students is high. Knowledge of students of reasons for and against self-medication seems appropriate. Self-medication may not be harmful on its own, but it poses a great threat when OTC and prescription drugs become abused. There is therefore need for education on appropriate handling and use of medicines by students. So more efforts to promote responsible self-medication by inclusion in the curricula of topics/courses dealing with rational drug and antibiotic use and general aspects of self-medication are needed. In addition, health authorities should practice more strict control over pharmacies.

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CONFLICT OF INTEREST

NIL

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