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Original Research Article

A questionnaire-based exploratory study on self medication among second year MBBS students

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ABSTRACT

Background: The practice of self-medication is expected to be higher in health science students due to their exposure to knowledge about different diseases and drugs. This study was done to assess the knowledge, attitude and practice of self-medication and to compare the impact of knowledge of Pharmacology on it, among second-year MBBS students.

Methods: A semi-structured questionnaire consisting of both open-ended and close-ended questions was prepared and given to second-year medical students of Kurnool medical college, Kurnool. Data was analysed and entered in Microsoft Excel (version 2019), and associations were tested using the Chi-square test. The results are expressed as counts and percentages. Statistical significance was p<0.05.

Results: Among the respondents, 37.33% are practising self- medication, 54.66% think knowledge of Pharmacology aids students to practice without any dire consequences. Most of the students take for fever (95.33%), (97.33%) for cough, cold, sore throat.84% were aware that it's not safe to take drugs pertaining to alternate systems of medicine like Ayurveda, homoeopathy. A statistically significant association between knowledge, attitude, practice and gender and residence has been observed.

Conclusions: The study shows that students are aware that self-medication is dangerous when followed by lay people. On the other hand, health professionals with knowledge about medications can take self-medication for common conditions without any dire consequences. They are also aware that it's not safe to take medications that come under alternate systems of medicines, and WhatsApp consultation is not to be encouraged.

Keywords: Self Medication, OTC drugs, MBBS Students, KAP

INTRODUCTION

Self-medication (SM) is a broad term that refers to obtaining and using drugs to treat self-diagnosed symptoms or disorders without seeking medical advice. This includes obtaining medicines without a prescription, resubmitting old prescriptions for purchase, sharing medicines with relatives or friends, and using leftover medicines stored at home. Self-medication is commonly

practiced in general population for common health ailments without any medical supervision, because many drugs are dispensed over the-counter (OTC).² Self-medication differs from self care in that it involves drugs that may do good or cause harm.³ In several studies it has been found that inappropriate self-medication causes wastage of resources, increases resistance of pathogens and generally causes serious health hazards such as adverse drug reactions, prolonged suffering and drug dependence.³⁻⁶

Since the 19th century, the medical profession has evolved as a major profession in caring for human health from their scientific discoveries in diagnostics, surgeries, and medicine, as a result of which patients have become passive in their self-care. Self-care and self-medication were considered unscientific around 1960. As the healthcare system became more expensive, but with the emergence of an increased number of chronic non-communicable diseases, most of which could be modified by self-care and by reducing risk factors, responsible use of self-medication with over-the-counter (OTC) drugs as part of self-care.

Self-medication can be practised and is appropriate for short-term relief of symptoms where accurate diagnosis is not needed and in uncomplicated cases of some chronic and recurrent diseases.7 However, irrational use of medicines, in particular self-medication with antibiotics, has been widely reported leading the WHO to call for attention to the dangers of self-medication as a cause of antimicrobial resistance.8 Self-medication patterns are influenced by many factors such as age, gender, income and expenditure, education level and medical knowledge. An increase in chronic diseases, lack of health services, poverty, increased media exposure and extensive advertisement of pharmaceutical products could be listed for the risk of self- medication.^{9,10} It is now evident that self-medication is widely practised in both developing and developed countries. India also faces the problem of inappropriate use of self-medication in significant number. 11 According to drug laws applicable to India, self-medication is permitted for OTC drugs, but there is no specific list of OTC drugs in India. Non-prescription drugs amongst youth, especially in students are being misused due to exposure to media and advertisements. There are many reasons for the increased likelihood of self-medication among medical students.³ These students have easy access to information from drug indices, literature, and other medical students to self diagnose and self medicate. In addition, they have easy access to the medication itself through physician samples provided by pharmaceutical representatives and "the white coat" guarantees trouble free access to drugs available in pharmacies. There is a paucity of studies on selfmedication among medical students.3It has become a serious ailment raising the concern of incorrect diagnosis and drug reaction as well. Being future medical practitioners, self-medication has a special impact in medical students. Prevalence of self-medication was found to vary in medical students of different countries in earlier studies. 12-16 The present study was undertaken to identify the reasons for, and the patterns of selfmedication among medical students. The misuse of nonprescription drugs amongst students has become a serious problem. Medical students may differ from the general population because they are exposed to knowledge about diseases and drugs. This study is done to assess the knowledge, attitude and practice of self-medication and to compare the impact of knowledge of pharmacology on it, among second year MBBS students.

METHODS

Study type, location, duration and selection criteria

Current study is a questionnaire-based exploratory study conducted among second year, 5th semester medical students of Kurnool medical college, Kurnool. The study was undertaken from June 2019 to July 2019. Students who gave voluntary consent to participate in the study were included in the study.

Procedure

A pre-designed semi-structured questionnaire consisting of both open-ended and close-ended was used to collect the relevant information pertaining to the study variables. The questionnaires were distributed to the undergraduate second year medical students after obtaining consent from the students. 150 students consented for the study and filled in the questionnaire. The students were briefed on the aims and objectives of the study. The age, gender and residence was noted. The following information was recorded regarding; type of medication, type of illness for which the medication was used, reason for not consulting a doctor, their knowledge, attitude and practice towards self-medication, source of information, and awareness of side effects. The questionnaires were assessed for their completeness and only the completed questionnaires were considered for the final analysis. For scoring the responses to questions regarding knowledge and attitude, 3-point Likert scale was used.

Statistical analysis

Data was analysed and entered in Microsoft Excel (version 2019), and associations were tested using the Chi-square test. The results are expressed as counts and percentages. Statistical significance was set at p<0.05.

RESULTS

Gender distribution

Out of 150 respondents, 75 were females, and 75 are males respectively.

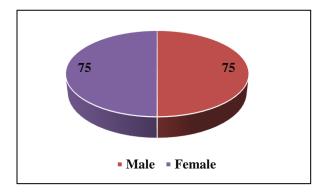


Figure 1: Gender distribution among participants.

Residence

Out of 150 respondents, 98 were hostelers, and 52 were day-scholars respectively.

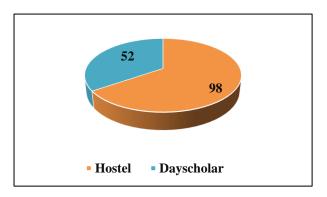


Figure 2: Residence of participants.

Sources of self-medication

Out of 150 respondents, around 74% opined major source of SM was from pharmacy and from family and friends.

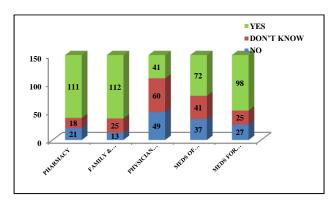


Figure 3: Sources of medication.

Questions regarding knowledge

Regarding the questions pertaining to knowledge 85.3% were aware that in appropriate SM results in drug resistance, and ADR'S.

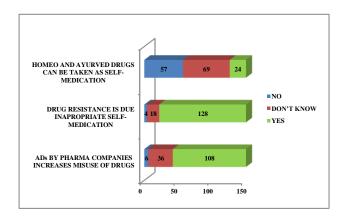


Figure 4: Questions regarding knowledge.

Questions regarding attitude

Around 50% opined self-medication is harmful to recipient. Most of the students, 54.6% opined that knowledge of pharmacology aids students in practicing self-medication. Females and hostelers have very good knowledge compared to males and days scholars (Figure 6-7). 95.33% were practicing SM for fever, 97.33% were practicing for cold, cough, sore throat. 80.66% and 74% were practicing SM for vomiting and diarrhoea. Results around 73.33% opined antibiotics were used as SM.48.66% opined WhatsApp consultations were preferred for minor ailments. Statistically significant association of knowledge and attitude with gender and with the residence were observed with p<0.05.

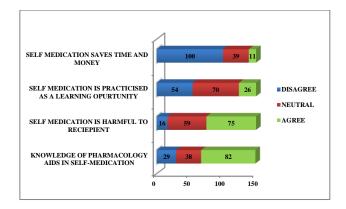


Figure 5: Questions regarding attitude.

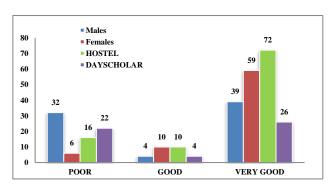


Figure 6: Scores regarding knowledge among participants.

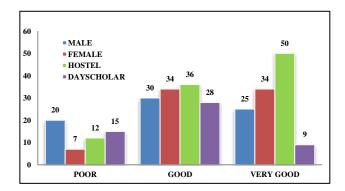


Figure 7: Scores regarding attitude among participants.

DISCUSSION

Self-medication is widely practised throughout the world, particularly among urban and educated populations. Due to their knowledge of diseases and drugs, doctors tend to self-medicate to the extent possible. Self-medication was found to be common in 25 to 56 percent of people in several studies.

Table 1: Conditions for which participants used selfmedication.

Condition	N	%
Fever	143	95.33
Cold, cough, sore throat	146	97.33
Skin allergies	34	22.66
Diarrhea	111	74
Pain abdomen	72	48
Vomiting	121	80.66
Ear, eye symptoms	34	22.66
Body ache	121	80.66
Insomnia	21	14
Menstrual symptoms	58	38.66

Table 2: Types of self-medication.

Route of Self-Medication	N	%
Practicing self-medication	56	37.33
WhatsApp consultation for minor ailments	73	48.66
WhatsApp consultation for major ailments	6	4
Antibiotics for common illness	110	73.33
Injections taken as self-medication	87	58

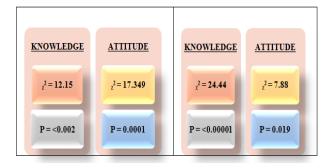


Figure 8: Association of knowledge and attitude with gender and residence.

Medical students learn about medications and how to choose them and describing what happens during undergraduate training, which includes internships in a variety of countries, including India. It is also known that during their formative years of undergraduate training, this group begins to rely on self-medication. The prevalence and pattern of self-medication in medical students have been described in a few studies, with varying results. Our study showed prevalence of about

37.33% which is lower than reported by Badiger et al reporting 92% prevalence in a study of 200 patients and Patil et al reporting 96% prevalence among 129 students. 17,18

About 74% respondents opined that source of information for self-medication is from family, friends and pharmacy similar results were observed in Sontakke SD et al study. 19 Among 150 participants, 98 felt that medication prescribed for others for similar conditions could be used as self-medication. About 85.3% respondents were aware that inappropriate selfmedication results in resistance of pathogens, adverse drug reactions, and drug dependence. About 70 % respondents opined that homeopathic and Ayurvedic medicines cannot be taken as self-medication. About 72% respondents think that misuse of non-prescription drugs has increased due to increased advertising by pharmaceutical companies. Most of the respondents (66.6%) disagreed that self-medication can save time instead of consulting a doctor while 7.3% agreed. When asked whether self-medication is harmful to recipient, 50% agreed while 10.6% disagreed. Most students (54.6%) opined that knowledge of pharmacology aids students in practicing self-medication while 19.3% disagreed compared to 70.89% in Patel et al study.20 Regarding questions on knowledge in our study, we found out that 78.6% females and 52% males had very good knowledge. About 73.4% hostellers and 50% dayscholars had very good knowledge. About 42.6% males and 8% females had poor knowledge. About 16.3% hostelers and 42.3% day-scholars had poor knowledge. Regarding questions on attitude, about 78.6% females and 73.4% hostelers scored very good while 42.6% males and 42.3% day-scholars scored poorly.

In our study it was observed that 37.33% students are practicing self-medication compared to studies of Shukla et al where 82% medical students practiced selfmedication and in Patel et al study 91% students practiced self-medication.^{20,21} Common illnesses with trivial symptoms were the most common reason for practicing self-medication. Cold, cough and sore throat (97.33%) was the most common reason for selfmedication reported by our students compared to James et al study where 63.2% was found. 20-22 For fever (95.33%), vomiting (80.66%), body aches (80.66%) and diarrhoea (74%) was seen. Similar observations were reported in a previously in Abula et al study.²³ Preferred route of practicing self-medication was through WhatsApp consultation for minor ailments (48.66%) and major ailments (4%). Majority of the students (73.33%) agreed that they used antibiotics as self-medication for common illnesses. About 58% students preferred injectables as self-medication.

The data recorded was analysed for finding out any associations using chi-square test. In our study, we found out that there was significant association (p=0.00001) between knowledge and gender. Significant association

(p=0.019) between scores of attitudes and gender was found out. There was a significant association between knowledge (p=0.002) and attitude (p=0.0001) with place of residence.

Limitations

Limitations of the study are single centre study and small sample size. In this type of studies, to come to conclusion on practicing of self-medication among undergraduate medical students, the sample should be from all batches from 1st year till final year. Multicentric study including sample from both urban and rural medical colleges can be taken.

CONCLUSION

The majority of medical students self-medicate using allopathic medications. Students use antipyretics, anti-inflammatory nonsteroidal drugs, cough suppressants, and antihistamines. The mild nature of the illness and the need to alleviate symptoms are two common reasons for self-medication. This descriptive study shows that self-medication was found to be particularly common among medical students. Drugs are readily available, information from textbooks or seniors is easily accessible, and previous prescriptions are easily obtainable. A majority of students were unaware of the potential side effects of the medications, and due to inappropriate self-medication, it has the potential to cause serious harm not only to the students themselves but also to those whom they suggest medication so the potential problems of self-medication should be emphasized to the students.

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Institutional Ethics Committee

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