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Original Research Article

A study to assess self-medication practice among undergraduate medical students in a tertiary care hospital

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ABSTRACT

Background: Self-medication is an important public health concern globally. Many factors influence the practice of self-medication among medical students, because of the earlier professional exposure to information about drugs in their curriculum. In view of this, the present study has been designed to assess the practice of self- medication among undergraduate medical students. The objective of the study was to assess self- medication practice among undergraduates and to list out the commonly selected drugs and the conditions.
Methods: This questionnaire based, cross- sectional model, was conducted among 150 students of 2nd year MBBS for a period of 3 months. This study was approved by Institutional Ethics Committee and written informed consent was obtained from all the participants.
Results: Out of 150 students 71 were male and 79 were female students with an average age of 19.5±1.5. 80% of the candidates practiced self- medication, (48%) for headache, followed by cough and cold (45.83%). The drugs preferred primarily were analgesics (67%), antimicrobials (64%), and the source of information was previous prescription (80%). 70% of the study subjects felt that, no need to visit a doctor for minor illness, 50% of the students anticipated, fear of selecting wrong drugs and adverse effects.
Conclusions: The practice of self- medication was highly prevalent among these future health care providers. Hence, this study emphasis an urgent need to strengthen the risk outweighs the benefit and consequences of self- medication practice.

Keywords: Self-medication, MBBS students, Questionnaire, Drugs

INTRODUCTION

Self-medication has become a part of the routine life, which is an unhealthy and risky practice.[1] Self-medication is one of the elements of self-care.[2] The prevalence rates of self-medication are high all over the world ranging from 5.76% to 68% in European countries, while much higher in the developing countries with rates as high as 92% in Kuwait, 76% in Pakistan and 59% in Nepal.[3] In India, self-medication is highly prevalent in both urban and rural set up, varying from 32.5% to 81.5% respectively.[4-6] Self-medication means, use of drugs to treat self- diagnosed disorders or symptoms, or the intermittent or continued use of a prescribed drug for chronic or recurrent disease or symptoms. In practice, it also includes use of traditional medication by family members, especially where the treatment of children or the elderly is involved.[7] Self-medication has both advantages and disadvantages. Appropriate self-medication relieves acute problems, time saving, economical, relieves the burden on the heath care professional, and it provides time for them to decide when to consult a qualified health care professional. Inappropriate self-medication on the other hand can result in failure of therapy, adverse drug reactions, prolonged suffering, drug dependence, economic loss, wastage of

resources and above all, development of bacterial resistance which is most alarming.[8]

The WHO defines, self- medication as 'the selection and use of medicines by individuals to treat self-recognized illness or symptoms.'[9] Responsible self- medication deals with good quality medicines, accompanied with all information about drug administration, adverse drug reactions, interactions with warnings, etc.[10]

Compared to general public many factors, influence the practice of self-medication amongst medical students. They have an easy access by professional information, during their course of studies to self- diagnose and medicate.[11] Students become more confident / overconfident, based on their "bookish" knowledge and may start implementing self-medication at the earliest. They may become successful in this attempt boosting up their confidence levels, and encourage themselves for its continued use or even over-use, or suffer such setbacks leading to detrimental health or a diseased state and drug dependence.[12]

The practice of self -medication on the basis of incomplete knowledge should not be encouraged at any cost among medical students, because they are the, future healthcare providers of our Nation. Though some students have agreed that, adequate knowledge about medicines is a must for responsible self-medication, yet some others prefers to consume medicines without proper medical advice and are ready to continue their risky behavior.[13-15] They should be made well aware, about the disadvantages of taking drugs without proper advice of a qualified health professional and the dangerous events following self -medication.[14] Hence it is important that the medical students should be educated about the consequences following self-medication, which might delay the treatment outcome/wrong diagnosis, drug interactions and adverse effects.[16]

Self-medication among doctors was found to be more prevalent, which was supported by a study conducted by Hem et al, in which they had stated, that 56% of physicians working in hospitals and the general practitioners and one fourth of the primary healthcare professionals in Brazil were shown to have self-medication practice.[17,18] 53% of doctors in Karnataka, had self-medication with antibiotics.[19]

As the present medical students are going to be future medical practitioners and health care providers, it is important to know their level of knowledge, regarding the different issues of self-medication practice. Hence, the present study has been undertaken to assess the practice of self -medication among second year undergraduate medical students.

METHODS

This was a cross sectional questionnaire-based study, conducted at Sri Venkateshwaraa Medical College Hospital and Research Centre, Puducherry. Before initiation of the study, Institutional Ethics Committee approval obtained and the study was conducted for a period of 3 months. Duration of the study November 2018 - January 2019.The undergraduate students studying in second MBBS, of all ages and both the gender were included in the study. Written informed consent was obtained from all the study participants. A semi –closed, pre validated questionnaire model was used in this study (Questionnaire enclosed in Annexure 1). A brief description about the purpose of the study and the procedure to complete the questionnaire was explained in detail to all the students. The candidates were instructed and properly guided to complete their response within the stipulated time. The results were analyzed and expressed by descriptive statistics, such as counts and percentages.

RESULTS

The demographic distribution of our candidates showed that, out of 150 students recruited, 79 (53%) subjects were females and male students constituted 71 (47%). The mean age of the study participants were 19.5±1.5 years.

Table 1: Demographic profile.

Demographic	
Sample size(n)	150
Male	71 (47%)
Female	79 (53%)
Mean age (in years)	19.5±1.5

Table 2: Questionnaire based distribution of response.

Sl. No	Question	Response		
1	Do you think self -medication is safe?	Yes 12 (8%)	No 128 (85.3%)	Uncertain 10(6.6%)
2	Have you taken self-medication in the past 6 months?	Yes 120 (80%)	No 30 (20%)	
3	How often do you practice self- medication?	Always 6 (5%)	Sometimes 107 (89%)	Rarely 7 (5.83%)
4	Do you consult a qualified medical practitioner after self- medication?	Always 24 (20%)	Sometimes 90 (75%)	Rarely 6 (5%)

Continued.

Sl. No	Question	Response			
5	Which of the following was the source of information of the drugs used for self - medication?	Internet 9 (7.5%)	Textbook 6 (5%)	Previous prescription 96 (80%)	Others 7 (5.83%)
6	What was the source of the drugs used for self-medication?	Medical store 94 (78.3%)	Home 10 (8.3%)	Sample medication 10 (8.3%)	Others 6 (5%)

Findings of this study revealed that, 85% of the study participants were well aware about the unsafety and risk of self-medication practice. Among 150 respondents, we observed that out of 150, 80% (120) of students practiced self- medication. Analysis of the source of information of drugs, we found that prescription given for previous illness was followed and used by 80% of the study subjects as the major source and 78.3% of them obtained drugs directly from medical stores. 75% of the candidates had agreed to consult a qualified medical practitioner after self-medication.

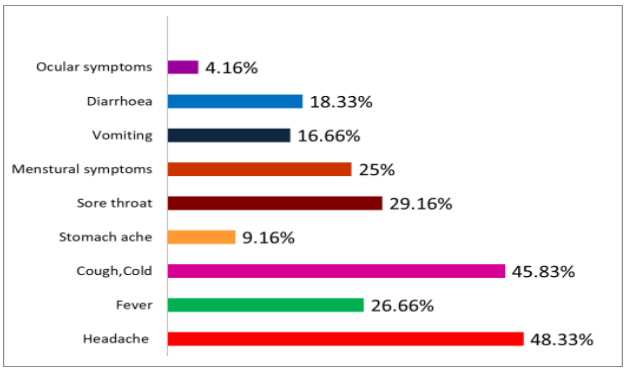

Figure 1: Common illness.

48.3% of students practiced self-medication for headache, followed by 45.83% for cough and cold, 29.6% were for sore throat.

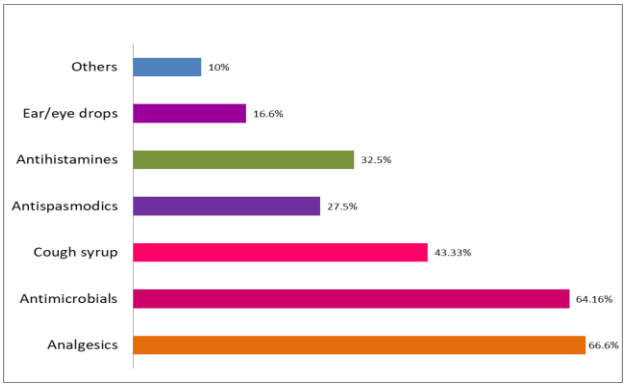

Figure 2: Drugs selected.

The most preferred drugs were analgesics accounting for 66.6%. The next common medications were, antimicrobials 64.16% and cough mixtures 43.33%. Only few of the participants experienced minor adverse effects like gastritis and rashes.

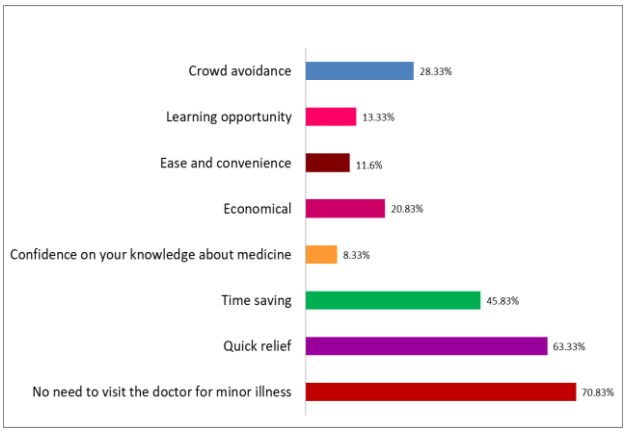

Figure 3: Aspects in favour of self- medication.

70.83%, 63.3%, 45.83% and 28.3% of the participants charted out, the various aspects favouring self-medication like, no need to visit a doctor for minor illnesses, quick relief, time saving and fear of crowd respectively. The credible points reported by study subjects, which not favouring self-medication practice were, fear of selecting wrong medication 50%, anticipated adverse effects 46.6%,while lack of knowledge and risk of mis- diagnosis were represented by 40% of study subjects.

DISCUSSION

Findings of this study showed that, 80% of the candidates were very much interested in self- medication practice, which was similar to the study done by (76%) Zafer et al.[20] This study also confirmed that, Prevalence of self-medication was higher among our students with the following favourable reasons like privacy, delicacy, waiting in queues, quick relief, shortage of time and no need to visit a doctor for minor illness, which was on par with Nirmal et al (84%).[21]

This study has found out, that the important source of information, as the prescriptions given for previous illness (80%) which was supported (82%) by Jagadeesh et al.[1] As regards to the conditions supporting self- medication among medical veterans, the views expressed by them, were, no need to visit a doctor for minor illness (70.83%) which was comparable with (77%) Banerjee et al.[14]

The points evidenced by the students for not practicing self-medication showed that, 50% of the participants were not confident on the right selection of drugs for self-medication, 47% feared for risk of adverse effects, 40% of them shared lack of knowledge about medicines and risk of wrong /mis- diagnosis, which was not in accordance with Sankdika et al (75%) results.[13]

The predominant signs and symptoms leading to practice of self- medication were headache (48%) followed by cough and cold, sore throat and fever, which was not appropriate (77%) with a study done by Kasulkar et al.[15] 25% of female subjects came out with personal reasons like menstrual symptoms which led them to practice self-medication, which was very much consistent with Kumar et al observations.[22]

Our study results proved beyond doubt that, there is an increasing trend towards use of analgesics (66%), antimicrobials (64%), cough syrup (43%) and antihistaminics (32%), which was in contradiction (42%) to Jagadeesh et al reports.[1] Only 28% of participants who took antibiotics completed the entire course of treatment, which was comparable with Chauhan et al (31%).[16]

CONCLUSION

Results of this research, has highlighted that self-medication practice was highly prevalent among second year medical students, who restricted the use only to minor illness. This restriction was with the view, that occasional self-medication will not cause any harm which is a wrong perception among the students.

Recommendations

- Ensuring that, prescription from a qualified health care professional is a good approach in health care.
- Counseling to be done against chronic habitual self-medication practices.
- Laws can be implemented to restrict over the counter drugs amongst community pharmacists/chemists.

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Ethical approval: The study was approved by the Institutional Ethics Committee

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ANNEXURE 1

A study to assess self- medication practice among undergraduate medical students in a tertiary care hospital.
Demographic data
Age: _____ Gender: _____
1) Do you think self -medication is safe?
(A) Yes (B) No C) Uncertain
2) Have you taken Self-medication in the past 6 months?
(A) Yes (B) No
3) How often do you practice self -medication?
(A) Always (B) sometimes (C) rarely
4) Do you consult a qualified medical practitioner after self -medication?
(A) Always (B) sometimes (C) rarely
5) Which of the following was the source of information of the drugs used for self- medication?
(A) Internet (B) Textbook (C) Previous prescription (D) Others (specify)
6) What was the source of the drugs used for self-medication?
(A) Medical store (B) Home (C) Sample medication (D) Others (specify)
7) According to you which of the following were the reasons in favour of self -medication? (Can choose multiple options)

No need to visit the doctor for minor illness
Quick relief
Time saving
Confidence on your knowledge about medicines
Economical
Ease and convenience
Learning opportunity
Crowd avoidance
If any others (please specify)

8) According to you what were the indications for self- medication? (Specify the drug name) (can choose multiple options)

Headache
Fever
Cough & cold
Stomach ache
Sore throat
Menstrual symptoms
Vomiting
Diarrhoea
Ocular symptoms
If any others (please specify)

9) According to you which of the following drugs were used for self -medication? (Can choose multiple options)(Mention the drug name)

Analgesics
Antimicrobials
Cough syrup
Antispasmodics
Antihistamines
Ear/eye drops
If any others(please specify)

10) Have you ever suffered from adverse effects as a result of self- medication?
(A) Yes (B) No
11) Will you suggest self -medication practice for your family members?
(A) Yes (B) No
12) According to you which of the following were the reasons for not taking self- medication? (Can choose multiple options)

Lack of knowledge about medicines
Risk of adverse effects
Risk of using wrong drugs
Risk of misdiagnosing
Risk of drug dependence
If any others(please specify)