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Research Article

EVALUATION OF SELF-MEDICATION PRACTICE AMONG MEDICAL STUDENTS IN AP

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ABSTRACT
Self-medication practice among medical students is an important issue with serious implications. Inadequate knowledge about the drugs can lead to under use or over use of drugs. It is therefore important to evaluate the knowledge and practice of medical students regarding use of self medication. In the present study the self-medication practice in first and second year students is compared. The first and second year MBBS students who took self-medication were included in the study. They were given a prevalidated questionnaire that included questions about self-medication practice. A total of 46 and 56 students of 1st and 2nd year were involved in self-medication. Most common drug was Paracetamol and fever was the most common condition. Source of drug information was previous prescription from physician. Adverse drug reaction was not observed by majority of students. 41.30% of the 1st year and 67.86% of 2nd year students read package insert. 30.43% 1st year and 50% 2nd year students take precautions. Use of branded drugs is common in both groups. 12 (26.09%) 1st and 24(42.86%) 2nd year students were aware about completing drug course. (91.30%) 1st year and (96.43%) 2nd year students are occasionally involved in self-medication. 1st year group 43.80% students mentioned use in emergency while 51.79% of 2nd year students mentioned quick relief as main advantage of self-medication. In 1st year group, 69.57% students did not mentioned any disadvantage while in 2nd year, 48.22% student mentioned adverse effects as main disadvantage of self-medication. 23.91% of 1st year and 35.71% of 2nd year students were aware about consulting physician after taking self-medication. Thus a large number of medical students consume self-medications. Awareness and change in attitude among the medical students is required to curb the practice of self-medication.

Key Words: *Medical Students, Self-Medication and Drugs*

INTRODUCTION
The use of medicines to treat self recognized symptoms by an individual is globally on the rise. According to WHO (World Health Organization) 2000, Self-medication is defined as the use of medicines by a patient on his own initiative or on the recommendation of a non professional or a lay person instead of seeking advice from a health care provider. It involves the use of non prescription medicines or OTC (Over the Counter) drugs on their own. In developing countries prescription drugs are also used as self-medication products without prescription from a registered medical practitioner (Hussain *et al*., 2011).

Since many years self care has been a feature of health care .Self-medication is a double edged sword. It can treat minor disease conditions that do not require the expensive medical treatment and in turn reduce the pressure on medical services particularly in countries with inadequate health care system (WHO, 2000). Thus, it provides a less cost alternative for people from lower socio-economic strata. The inappropriate use of self-medication can have serious insinuation. It includes drug resistance, adverse drug reactions, drug interactions, increased polypharmacy, delay in treatment of serious conditions and masking of symptoms (Hughes *et al*., 2001).

Self-medication assumes a special significance among the medical students. The first year medical students do not differ from the general population as they are not taught about the drug and disease

condition in the first year curriculum. But, second year students are well exposed to the details of disease condition and drugs (Sontakke *et al*., 2011). Hence, the present study was planned to evaluate self-medication practices among the first and second year medical students of Rajiv Gandhi Institute of Medical Sciences Adilabad A.P.

MATERIALS AND METHODS

The present cross- sectional study included first year and second year medical students who had taken any self-medication drugs during last 2 months. A pretested semi - structured questionnaire containing both open and close ended questions was prepared. The respondents were prior informed that the participation in the study was voluntary and the information collected would be anonymous. Written informed consent was sought from each participant after explaining the purpose of the study and confidentiality was ensured. The information regarding the type of self-medication, disease condition for which medication was used and the reason for not consulting a doctor were collected. Their attitude towards self-medication and source of information was also recorded. Data was analyzed using Prism 5.1 software (trial version) and Microsoft excel. The results were presented as absolute figures and percentages. Analysis was done by using the Chi-square test of significance to identify the associations among variables. P value less than 0.05 was considered to be statistically significant.

RESULT

A total of 46 first year students comprising 24 (52.17%) males and 22 (47.82%) females and 56 second year students which includes 23 (41.07%) males, 33(58.93%) females practiced self-medication. The most commonly used drug for self-medication was Paracetamol (91.30%) by first year and (89.29%) by second year students. The NSAID Diclofenac is used more by second year (26.79%) as compared to first year students (15.22%). Propiphenazone is used by 13.04% first year students (Table 1).

Tables 1: Drugs used for self-medication

Drugs	1st MBBS		2nd MBBS	
	No.	%	No.	%
Paracetamol	42	91.30	50	89.29
Other *NSAIDs*	22	47.83	38	67.86
Anti-Histaminics	26	56.52	36	64.29
Ranitidine	02	04.35	11	19.64
Antibiotics	00	00.00	11	19.64
Cough Syrup	01	02.17	04	07.14
Metronidazole	00	00.00	05	08.93
B-Complex	03	06.52	07	12.50
Dicyclomine	02	04.35	02	03.57
Other Drugs	00	00.00	06	10.71

The most common indications for self-medication were fever 71.74%, 83.93%, common cold 60.87%, 55.36% and headache 47.83%, 32.14% in first and second year students respectively. This is shown in Figure 1.

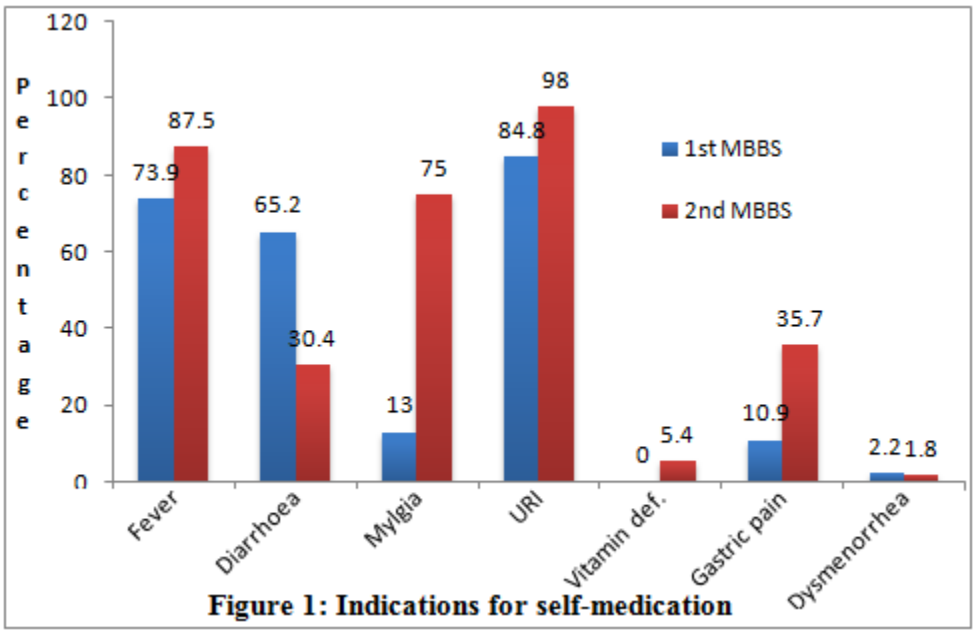

Figure 1: Indications for self-medication

Table 2 shows the advantages and disadvantages of self-medication as prescribed by the students. According to first year students the most important advantage of self-medication is its use in emergency condition 20 (43.80%) followed by saving of time 12(26.09%) whereas quick relief 29 (51.79%) and also the saving of time 14 (35.90%) are the advantages for second year students. Not a single first year student believed that there is a need to go to doctor. Regarding the disadvantages 32 (69.57%) of first year students opined that there are no disadvantages of self-medication while 27 (48.22%) second year students prescribed adverse drug reactions as the most important disadvantage.

Tables 2: Advantages and disadvantages of self-medication

Advantages	**1st MBBS**		**2nd MBBS**	
	No.	**%**	**No.**	**%**
Time Saving	12	26.09	14	25.00
Money Saving	08	17.39	08	14.29
Emergency Drugs	03	06.52	13	23.21
Quick Relief	28	60.87	29	51.79
Disadvantages				
Drowsiness	16	34.78	17	30.36
ADR	09	19.57	25	44.64
Toxicity	02	04.35	17	30.36
Recurrence	00	00.00	04	07.14

Most of the first year students 30(65.22%) and 34 (60.71%) second year students prescribed the self-medication drugs by brand name.34 (73.91%) first year students and 26 (64.29%) second year students reported no adverse drug reactions to self-medication drugs. Regarding the source of information, 18 (39.13%) first year students and 25 (44.64%) second year students make use of previous prescriptions for self-medication. 10 first year students sought advice from friends, 13 from parents whereas 16 second year students took advice from friends and 10 from parents. Surprisingly, 11 second year students refer

pharmacology books. When asked about the frequency of self-medication 42 (91.30%) first year students and 54 (96.43%) second year students opined that self-medication is taken occasionally i.e. once in a month.

The majority of the second year students are well aware about the different aspects of self-medication practices. The awareness of the first and second year students with respect to reading package insert was 19 (41.30%) and 38 (67.86%), following instructions was 34(73.91%) and 51 (91.07%), taking precautions was 14 (30.43%) and 28 (50%), awareness about complete course of drug was 12 (26.09%) and 24 (42.86%), awareness about consulting physician was 11 (23.91%) and 20 (35.71%) respectively. There was significant difference between the two groups in reading package insert, following instructions and taking precautions.

DISCUSSION

In the present study self-medication is widely practiced by both first and second year medical students. Moreover, a gender based difference is found among the second year students; female preponderance is more. Previous studies had shown the prevalence of self-medication of 57.05% among medical students in West Bengal (Bannerjee and Bhaduri 2012), whereas it was 77.98% in first year and 74.71% in second year medical students in Nagpur (Sontakke *et al*., 2011). The higher prevalence among females is also found in other studies (Ezz and Elarab, 2011). There is wide variation in prevalence of self-medication practice in the general population. It is 70% in Jammu (Sharma *et al*., 2005), and 87% in U.P (Verma *et al*., 2010). The highest prevalence of self-medication 94% is seen in University students of Hong Kong (Grace *et al*., 1995). Thus, the world wide increased trend of self- medication tends to make it as an occupational hazard for medical profession (Montgomery *et al*., 2011). During first year of medical curriculum, the students learn the basic concepts while in second year they are exposed to the knowledge of drugs and diseases and hence the reason for more prevalence in second year students.

The most commonly used drugs for self-medication were analgesics, antipyretics and anti-histamines in both the groups, but more in second year students. The commonest indications for self-medication in the present study were fever, pain and common cold in both the groups. This is congruence with most of the other studies (Abay and Amelo, 2010, Angamo and Wabe 2012, Shanker *et al*., 2002). These can have many implications. If the students are taking antihistaminic for common cold then that is definitely helpful as it decreases the burden on the health care providers. The medical college is tertiary care hospital which caters to the health care need of most of nearby population. Self-medication reduces the pressure on medical services in regions with inadequate health care resources. The other aspect is that these drugs are freely available as OTC drugs. The medical students should have enough discrimination in using different drugs among the antihistamines; surprisingly it was found that antihistaminics like chlorphenaramine, consumed by first year student associated with driving, resulted in vehicular accident. The drugs are like magic bullets, lack of detail knowledge about the drugs can result in mishaps. In another incident, Diclofenac was consumed by a first year student. She misdiagnosed Acute Appendicitis as Dysmenorhoea. So there can be masking of serious illness by analgesics and anti pyre tics.

The sources of self-medication are previous prescriptions, parents, friends, TV, Internet and books in case of second year students. Instead of medical practitioners, parents and friends as a source can have dangerous implications. Nowadays the use of Internet for promotion and sale of self-medication drugs just like consumer article is on rise .The second year students study in detail the pharmacology of the drugs from textbooks which can be source of information. Hence, they are more critical in reading the package insert, instructions and take necessary precautions as compared to their counterpart in first year. But in one study, it was found that 71.6% of the first year medical students read package insert (Henry *et al*., 2006). Another surprising finding in the present study is that irrespective of the academic year, the students took self-medication by brand names. The academic training, that the drugs should by prescribed by generic names, has not influenced the behavior of the second year students. More efforts are required to be undertaken in this aspect. This awareness about the drug prescription was found to be more in

second year students in one of the study (Sontakke *et al*., 2011). According to Syed *et al*., (2008) awareness regarding this aspect should be taught in Medical ethics earlier in the curriculum.

The students of both academic years had a fairly good knowledge of the advantages and disadvantages of self-medication. The advantages cited were usefulness during emergency by the first year and quick relief by the second year students. This attitude of self diagnosis by using drugs in emergency might lead to misdiagnosis. Initial self treatment should be followed by expert opinion. Self-medication used for treatment of minor illness provides quick and easy relief and can definitely decrease the workload on the medical specialists. But the first and second year medical students are not enough trained to make such discrimination. In a study conducted in Punjab 42.42% medical students cited the advantage of self-medication as quick relief while 36.78% opined that there is no need to visit doctor for minor illness (Gupta *et al*., 2011). Regarding disadvantages of self-medication 69.57% first year students are of the view that that there are no disadvantages whereas 30.36 % second year students expressed adverse drug reactions as the disadvantage. This might be due to the learning of adverse drug reactions in pharmacology by the second year students. This finding is similar to earlier studies (Henry *et al*., 2006).

Thus, the medical students try to make use of their inadequate knowledge in self treatment. In fact, they should judiciously make use of self-medication. Self-medication has its own advantages and disadvantages. It should be included in Medical Ethics as a part of undergraduate curriculum.

CONCLUSION

Self-medication is widely practiced among the students of Medical College with analgesic, anti-pyretics and anti-histamines as the commonly used drugs for the treatment of fever, pain and common cold. The students should be educated and awareness should be created for the appropriate use of self-medication.

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