

## Original Research Article

# A cross-sectional study on self-medication practice and attitude towards self-medication among medical students of GMERS Medical College, Valsad

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## ABSTRACT

**Background:** Self-medication is becoming a most prevalent practice among educated people across the world. In today's era, internet and media is one of the most important sources for promoting self-medication practice. Medical students are highly influenced with this practice as their future medical preference and the fact that medical students find themselves having more knowledge about drugs this may lead to irrational usage of drugs. Aim and Objectives of the study were conducted to know the 1. Self-medication practices among medical students 2. Common, indications and reasons for self-medication practice. 3. Attitude of medical students towards self-medication practice.

**Methods:** A cross-sectional, questionnaire-based study was conducted among undergraduate medical students of GMERS Medical College Valsad. The study was carried out in the months of October to December 2017. Medical students of first and final year MBBS participated voluntarily in this study after being briefed in detail about the goals & method of the study.

**Results:** In this study, 91.50% of medical students were practiced self-medication. The common indication for self-medication was fever (76.50%) and cough (75.96%). Acquaintances (67.76%) are main source of information for self-medication. Common reasons they know the medicine (78.14%) and previous exposure (64.48%). 12.5% student perceived self-medication is harmless and 21.0% of medical students advise other to take self-medication.

**Conclusions:** It was concluded that more than half of strength of students practice self-medication for various illnesses; the reason might be the awareness of drugs due to easy accessibility of information through books, internet as well as availability of medicine without prescription from pharmacist. So, essential measure should be taken to reduce the practice of self-medication among students to avoid development of drug dependence, resistance and drug interactions.

**Keywords:** Self-medication, Medical students, Practice and attitude

## INTRODUCTION

The World Health Organization (WHO) defines self-care as the primary public health resource in the healthcare system.<sup>1</sup> Self-medication constitutes an important part of self-care. Improvements in knowledge levels, socioeconomic status and education may provide the

foundation for successful self-medication. The booklet on self-medication published by the WHO mentions that self-medication involves the use of medicinal products by the consumer to treat self-recognized disorders or symptoms or the intermittent or continued use of a medication which was prescribed by a physician for a chronic or recurring disease or symptoms.<sup>1</sup>

Self-medication is the practice of intake of medicines by the people on their own or with help of a pharmacist, but without proper advice or prescription from a medical professional to treat a self-diagnosed condition.<sup>2</sup> Self-medication also involves getting medicines without a prescription, resubmitting old prescriptions to buy medicines, telling about medicines to friends or relatives or using leftover medicines stored at home.<sup>3</sup>

Inappropriate self-medication wastes resources, increases the likelihood of adverse drug reactions and may also be involved in antimicrobial resistance.<sup>4</sup> Self-medication is widely practice worldwide especially developing country as many drugs are dispensed over the counter without prescription and may lead to irrational usage of drugs. According to some studies, it was found that the burden of self-medication with antibiotics is higher in developing countries than in developed countries.<sup>5</sup> The prevalence is 4-75% in Asia, which is lesser in northern Europe as low as 3%.<sup>6</sup>

According to 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.<sup>7</sup> Otherwise self-medication if not based on authentic medical information can lead to irrational use of drugs, wastage of resources, increased resistance of pathogens and can lead to serious health hazards such as adverse drug reaction and prolonged morbidity.<sup>8</sup>

Not much is known about health-related problems and health care utilization, including self-medication among the youth. The youth are easily and highly influenced by the media and internet which promotes self-medication behavior.<sup>9</sup> An increased advertising of pharmaceuticals poses a greater threat of self-medication to the younger population in general. This raises concerns of incorrect self-diagnosis, drug interaction, and use of drugs other than for the original indication.<sup>10</sup>

Medical students though have not legal permit to prescribe the medicine, but have an inevitable urge of self-medication practice themselves and also for others as they are going through the professional course for their gradual acquirement of knowledge regarding different drugs and their proper use.<sup>4,11</sup>

Prevalence of self-medication was found to vary in medical students of different countries in earlier studies. However, the pattern has not still been explored among medical students of Valsad. With this background, the current study was undertaken to ascertain the prevalence, practices of self-medication and attitude regarding self-medications among undergraduate medical students of GMERS Medical College, Valsad.

## METHODS

A cross-sectional study was carried out among undergraduate medical students of GMERS Medical College Valsad in months of October to December 2017 for the period of three months.

Medical students of first and final year MBBS participated voluntarily in this study after being briefed in detail about the goals and method of the study.

Out of 234 undergraduate medical student of 1<sup>st</sup> MBBS and 3<sup>rd</sup> MBBS participated in a study, a total of 200 medical students were consider for study purpose with recall period of one year.

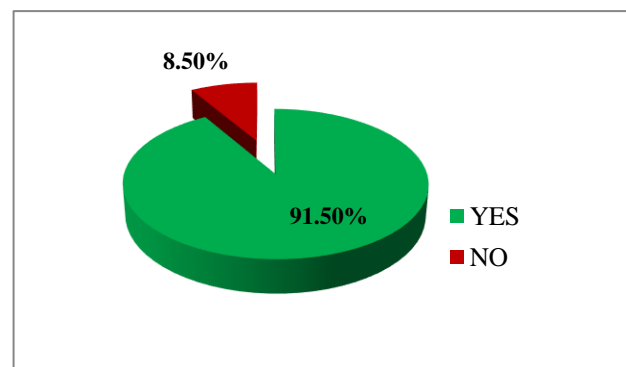
A medical student those who were absent during survey, those who gave incomplete information on self-medication were excluded from this study.

A predesigned, semi-structured questionnaire was used to collect the relevant information pertaining to study variables. A questionnaire consists of questions regarding age, sex and self-medication practices like reason, sources, symptoms, method of purchasing the medicine, types of medicine used etc. for self-medication.

Self-medication was widely practice by medical students so this study was conducted to know the prevalence of self-medication and various factor related with self-medication among medical students of this Institute.

The data was entered in MS excel and analyzed by using statistical software.

## RESULTS



**Figure 1: Self- medication practice among medical students.**

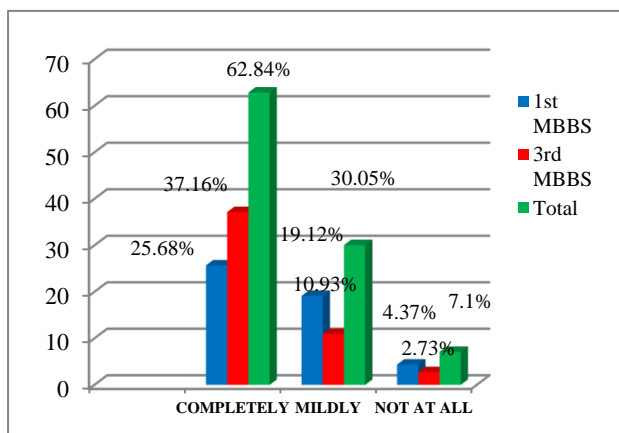
A total 200 medical student participated in this study, of this 101 (50.50%) were male and 99(49.50%) were female. Out of 200 medical students of 183 (91.50%) were practiced self-medication in last 6 months, Figure 1.

**Table 1: Sources of information for self-medication among medical students.**

Sources	1 <sup>st</sup> MBBS N (%)	3 <sup>rd</sup> MBBS N (%)	Total N (%)
Chemist	38 (20.76)	36 (19.67)	74 (40.44)
Acquaintances	63 (34.43)	61 (33.33)	124 (67.76)
Multimedia	22 (12.02)	19 (10.38)	41 (22.40)
Social media	12 (06.56)	13 (07.10)	25 (13.66)
Old prescription	42 (22.95)	36 (19.67)	78 (42.62)
Medical literature	08 (04.37)	68 (37.16)	76 (41.53)
Others	04 (02.18)	02 (01.09)	06 (03.28)

Above table shows that acquaintances 124 (67.76%) is main source of information for self-medication followed by old prescription 78 (42.62%), medical literature 76 (41.53%), chemist 74 (40.44%), Multimedia and social media 66(36.06%). Acquaintances as a as source of information almost in same proportion for (34.43% and 33.33%) 1<sup>st</sup> and 3<sup>rd</sup> MBBS student but medical literature as source of information is higher among 3<sup>rd</sup> MBBS as compared to 1<sup>st</sup> MBBS Students (37.16%, 4.37%).

Table 2 show the distribution of medical students as per common symptoms for self-medication, we noted that fever is main symptom for self-medication 140 (76.50%) followed by cough 139 (75.96%), Headache 132 (72.13%) abdominal pain 35 (19.12%), Vomiting 32 (17.49%), Diarrhoea 31 (16.94%) and so on. Indirectly it also indicates various kind of symptoms experience by medical students during their study.



**Figure 2: Effect on symptoms after self-medication among medical students.**

115 (62.84%) of medical students get complete relief from symptoms after self-medication, while 55 (30.05%) get mild relief from their symptoms and 13 (07.10%) have no relief from their symptoms after self-medication. (Figure 2)

**Table 2: Common symptoms for self-medication among medical students.**

Symptoms	1 <sup>st</sup> MBBS N (%)	3 <sup>rd</sup> MBBS N (%)	Total N (%)
Headache	66 (36.06)	66 (36.06)	132 (72.13)
Fever	64 (34.97)	76 (41.62)	140 (76.50)
Cough	64 (34.97)	75 (40.98)	139 (75.96)
Abdominal pain	16 (08.74)	19 (10.38)	35 (19.12)
Menstrual problems	03 (01.64)	07 (03.82)	10 (05.46)
Body ache/ weakness	16 (08.74)	28 (15.30)	44 (24.04)
Diarrhoea	13 (07.10)	18 (09.84)	31 (16.94)
Vomiting	14 (07.65)	18 (09.84)	32 (17.49)
Acidity	09 (04.92)	18 (09.84)	27 (14.75)
Skin diseases	07 (03.82)	14 (07.65)	21 (11.47)
Allergy	04 (02.18)	11 (06.01)	15 (08.20)
Others	05 (02.73)	06 (03.28)	11 (06.01)

**Table 3: Reasons for self-medication among medical students.**

Reasons	1 <sup>st</sup> MBBS (n=90) N (%)	3 <sup>rd</sup> MBBS (n=93) N (%)	Total (n=183) N (%)
Knew the medicine	65(35.52)	78(42.62)	143(78.14)
Previous exposure	49(26.77)	69(37.70)	118(64.48)
Trivial sickness	36(19.67)	47(25.68)	83(45.35)
Busy lifestyle	07 (3.82)	09 (4.92)	16(08.74)
Works faster	05 (2.73)	08 (4.37)	13(07.10)
Similar medicine in past	41(22.40)	38(20.76)	79(43.17)
Negative attitude	01(0.55)	00(00.00)	01(00.55)
Alternative medicine	06 (3.28)	01(0.55)	07(03.82)
Others	08 (4.37)	02 (1.09)	10 (5.46)

Above table shows the reasons for self-medication among medical students and we found that 78.14% do the self-medication as they knew the medicine, 64.48% had previous exposure, 45.35% sued for trivial sickness, 43.17% used similar medicine in past. Also noted that the reason for self-medication is almost similar among 3<sup>rd</sup> year MBBS and 1<sup>st</sup> year MBBS students.

**Table 4: Attitude of medical students towards self-medication (n=200).**

Response	1 <sup>st</sup> MBBS N (%)	3 <sup>rd</sup> MBBS N (%)	Total N (%)
<b>A. Opinion on Self-medication</b>			
Harmful	17 (08.50)	08 (08.00)	25 (12.50)
Harmless	22 (11.00)	34 (17.00)	56 (28.00)
Can't say	61 (30.50)	58 (29.00)	119 (59.50)
<b>B. Is it acceptable to do SM if you had same symptoms as you had in previous illness</b>			
Yes	37 (18.50)	54 (27.00)	91 (45.50)
No	19 (09.50)	15 (07.50)	34 (17.00)
Don't know	12 (06.00)	06 (03.00)	18 (09.00)
Can't say	32 (16.00)	25 (12.50)	57 (28.50)
<b>C. Will you advice other to take self-medication</b>			
Yes	20 (10.00)	22 (11.00)	42 (21.00)
No	30 (15.00)	43 (21.50)	73 (36.50)
Can't say	50 (25.00)	35 (17.50)	85 (42.50)

Table 4 showed the attitude of medical students towards the self-medication practice and noted that only 25 (12.50%) of students said that self-medication is harmful, 59.50% can't say anything on this. (Table 4A) 91 (45.50%) students said that it is acceptable to do self-medication for similar kind of illness experienced in past. (Table-4B) 73 (36.50%) of students are not in favour to advise self-medication practice to others while 85 (42.50%) can't say anything on this. (Table 4 C)

## DISCUSSION

In present study noted that prevalence of self-medication among medical student in institute was 91.50%. Various studies conducted among medical students also showed high prevalence of self-medication practice. This indicates self-medication is widely practiced by medical students due to their academic knowledge and exposure to drugs.<sup>12,11,8</sup>

In present study total 2000 medical student were participated of this 50.50% were male and 49.50% were female. We found that 91.50% were practiced self-medication in last 1 year.

Seema Rai et al in her study among undergraduate medical students of Srinivas Institute of Medical Sciences and Research Centre, Mukka, Mangalore noted a predominance of female participants (66.8 %) and 33.2% were males. Among those 95.37% students practiced self-medication, which is similar to our study.<sup>12</sup> Alam et al in their study among medical student and pharmacy student in Bangladesh with 87 % response rate of total and found that 60% were females and the remaining 40% were males. Among 250 medical students, 65.2% are female and the rest are male.<sup>13</sup>

In present study we noted that acquaintances (67.76%) are main source of information for self-medication followed by old prescription (42.62%), medical literature (41.53%), chemist (40.44%), Multimedia plus social media (36.06%).

In study conducted by Kumar et al Source of information about drugs was Old prescription for same illness (53.10%), Academic knowledge (44.50%) Pharmacist (21.90%), Friends (18.50%) Drug advertisement/Internet (17.60%).<sup>14</sup> Patil et al noted 54.63% used old prescription for same illness as source of information followed by friends, pharmacist, academic, advertisement and internet.<sup>15</sup>

In our study we noted that fever is main symptom for self-medication (76.50%) followed by cough (75.96%), Headache (72.13%) abdominal pain (19.12%), Vomiting (17.49%), Diarrhoea (16.94%) and so on.

Kumar et al noted indication for self-medication were fever (75.1%) headache (64.1%), cough and cold (58.7%), pain (57.5%), sore throat (40.1%) vomiting (28.0%), diarrhoea (26.6%) and so on.<sup>14</sup> Rai et al noted that fever was the common indication found for self-medication followed by pain, cough, common cold, headache and so on, similar finding were observed in earlier studies conducted in Ethiopia.<sup>12,16</sup> While cold and cough was reported as common indications in study conducted in West Bengal and South India.<sup>8,11</sup>

In present study found the various reasons for self-medication and we noted that 78.14% of students do the self-medication as they knew the medicine, 64.48% had previous exposure, 45.35% sued for trivial sickness, 43.17% used similar medicine in past. Also noted that the reasons were almost similar among 3<sup>rd</sup> year MBBS and 1<sup>st</sup> year MBBS Students.

Study conducted at coastal south India noted illness too trivial for consultation (70.50%), sufficient pharmacological knowledge (45.00%), to save time (19.00%), avoid crowd at OPD (11.20%) and privacy (05.20%) were the reasons noted by Kumar et al in their study.<sup>14</sup> A study conducted among undergraduate medical students of a Saudi tertiary institution noted the various reasons for self-medication were having idea about the medicine (80.60%), previous experience (65.3%), experience of others (28.90%), personal conviction (21.10%), distrust doctors (4.0%).<sup>17</sup>

As per attitude on self-medication is concerned recorded that only 12.50% of students said that self-medication is harmful, 59.50% can't say anything on this. 45.50% students said that it is acceptable to do self-medication for similar kind of illness experienced in past. Pal et al showed that 85.4% of medical students were agreed that Self-medication would be harmful if taken without proper knowledge of drugs and disease. They also noted that 48.6% agree and 11.3% strongly agree with the statements that self-medication is acceptable for medical students.<sup>18</sup>

In this study 21.0% of students advise self-medication practice to other which was twice (7.27%) as compared to study conducted by Shivaraj Patil et al.<sup>15</sup>

## CONCLUSION

Self-medication is practiced widely among medical students. Stringent regulations should be made to prevent dispensing medicines without a prescription. There is also a need to create awareness and educate students regarding hazards of self-medication practice.

## Limitations

The study was based on self-reported data about self-medication in past 1 year hence recall bias cannot be ruled out. The study did not look into as to how many students have physicians in their family so their influence as a source of prescription cannot be ruled out. This study results cannot be generalized as it was conducted in a medical college hence there is a need to conduct multi-centric studies to understand the various factors influencing self-medication.

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