

**Self-Medication Practice among the Undergraduate Medical Students of Government Medical College, Uttarakhand**

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**ABSTRACT**

**Background:** Self-medication is a human behavior in which an individual uses a substance to self-administer treatment for physical or psychological ailments. The most widely used drugs for self-medication are available over the counter for treating common health issues at home or as dietary supplements. It holds a special significance among medical students as they are future doctors. **Objective:** To assess self-medication practice among the undergraduate medical students **Material and Methods:** A cross-sectional study was conducted among the undergraduate medical students of Government Medical College about self-medication practice. All the students present on the day of data collection, who have given written consent and volunteered to participate were included in this study. Data collected was entered into Microsoft Excel 2007 and results were expressed as percentages. **Result:** Out of 431, 91.9% of the students practice self-medication ever in their life out of which, 90.4% practice self-medication in last one year. Majority of the students practice self-medication for fever (89.1%), antipyretics being most commonly used drug. Mild nature of illness (77.8%) was the commonest factor for self-medication and previous prescription (59.6%) was found to be useful source of information. Both convenience and incorrect dosage at 65.9% was recorded as the commonest advantage and disadvantage respectively. 48.7% of the students favour self-medication practice. **Conclusion:** The prevalence of self-medication among the undergraduate medical students is quite high in this study, though less than half of them favour its practice.

**Key-words:** Self-medication, practice, undergraduate medical students

**INTRODUCTION**

Self-medication (SM) has been defined as the selection and use of medicines including herbal and traditional products by individuals to treat self-recognised illnesses or symptoms. It is one of the elements of self-care.<sup>1</sup> Recognizing the responsibility of individuals for their own health and awareness that professional care for minor ailments is often unnecessary has made an important place for self-medication in the health care system. Improvements in people's general knowledge, level of education and socioeconomic status in many countries form a reasonable basis for its widespread success.<sup>2</sup>

In developing countries like that of India, easy availability of a varied kind of drugs together with the problem of inadequate health services result in increased proportions of drugs used as SM compared to prescribed drugs.<sup>3</sup>

Recently, the Government of India has banned the sale of 328 Fixed Dose Combinations (FDCs) including the one available as over the counter (OTC) without doctor's prescription but whether it will be strictly followed throughout the country is questionable.<sup>4</sup>

Medical students being exposed to the subjects in medicine are more prone for SM which may, at times leads to untoward consequences. They have easy access to information from drug indices, literature, and other

medical students to self-diagnose and self-medicate. In addition, 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.<sup>5</sup>

A study conducted at All India Institute of Medical Sciences, New Delhi found that self-medication is high among undergraduate medical and paramedical students in India and it increases with medical knowledge.<sup>6</sup>

As today's undergraduate medical students are responsible doctors of future, this study has made an attempt to assess about the practice of self-medication among them.

**MATERIALS AND METHODS**

The cross-sectional study was done among the undergraduate medical students of a Government Medical College in Uttarakhand. The study period was of 3 months duration i.e. from August - October, 2017. Every year 100 students are admitted in an academic session starting from the month of August. Therefore, the total number of undergraduate medical students should be about 500 at one particular time. All the students present on the day of data collection were explained the purpose of the study. They were told that their participation was

voluntary. The participants were assured of the confidentiality and anonymity of the information they provide, as the students were asked not to write their names and to elicit correct response from them. The written informed consent was taken. A predesigned, pretested, semi-structured, self-administered questionnaire was used to collect data. After excluding the incomplete proforma and also because of absentees on the day of study being conducted, 431 completed questionnaires were considered for analysis. The data collected was entered into Microsoft Excel 2007 and results were expressed as percentages. Ethical approval was obtained from Institutional Ethics Committee prior to the commencement of study.

**RESULTS**

Of the 431 students, most 252 (58.5%) of the students were in 20-23 years of age group. The mean age was 20.55±1.6 years. Female students constitute 267 (62.0%). 54 (12.5%) of the student’s parents were doctors or related to health care while 200 (46.4%) of the student’s close relatives were doctors or related to health care. 396 (91.9%) of the students practice self-medication ever in their life and of these, 249 (62.9%) initiated self-medication ≥ 17 years of age. 358 (90.4%) practice SM in last one year, mostly 254 (70.9%) at a frequency of 1-5 times in a year. [Table 1]

**Table 1: Characteristics of the undergraduate medical students**

Variables	Frequency	Percentage
<b>Age group (years)</b>		
17- 20	123	28.5
20-23	252	58.5
23-26	56	13
<b>Sex</b>		
Male	164	38
Female	267	62
<b>Any parent doctor or related to health care</b>		
Yes	54	12.5
No	377	87.5
<b>Any close relative doctor or related to health care</b>		
Yes	200	46.4
No	231	53.6
<b>Practice self- medication ever in life</b>		
Yes	396	91.9
No	35	8.1
<b>If yes, age of initiation</b>		
<17	147	37.1
≥17	249	62.9
<b>Practice self- medication in last one year</b>		
Yes	358	90.4
No	38	9.6
<b>If yes, no. of times in a year</b>		
≤5	254	70.9
>5	104	29.1

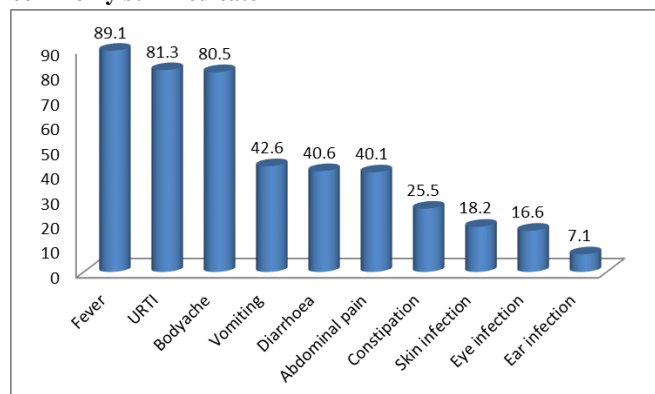
**Table 2: Factors contributing to self-medication among the undergraduate medical students**

Variables	Frequency	Percentage
<b>*Reasons for self medication</b>		
Mild nature of illness	308	77.8
Previous experience with same illness	236	59.6
Urgency	180	45.4
Previous prescription with same illness	175	44.2
Time saving	164	41.4
Easy availability	164	41.4
Money saving	53	13.4
Privacy	21	5.3
<b>*Source of information for self medication</b>		
Previous prescription	236	59.6
Medical store	210	53
Friends/Seniors	193	48.7
Family members	173	43.7
Medical Books	148	37.4
Internet	111	28
<b>*Advantage of self-medication</b>		
Convenience	284	65.9
Quick relief	238	55.2
Time saving	231	53.6
Economical	74	17.2
<b>*Disadvantage of self-medication</b>		
Incorrect dosage	284	65.9
Wrong diagnosis	254	58.9
Adverse drug reactions	233	54.1
Incorrect duration	222	51.5
<b>Favour self medication</b>		
Yes	210	48.7
No	221	51.3

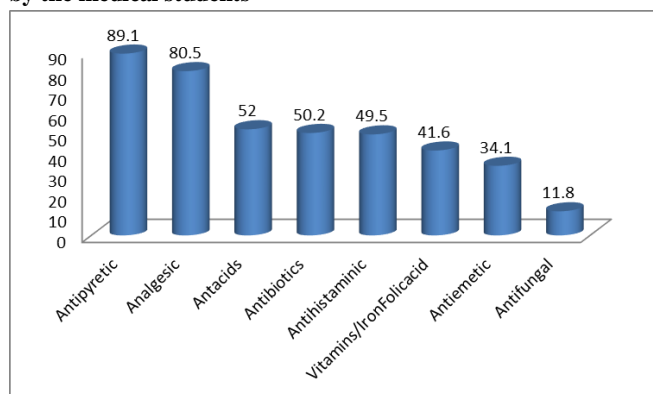
\*Multiple responses

Majority of the students practice self-medication for fever (89.1%), followed by upper respiratory tract infection (URTI), bodyache, etc. [Fig. 1]

**Figure 1: Conditions for which the medical students commonly self-medicate**



Common group of drugs includes antipyretics (89.1%), analgesics (80.5%), and others. [Fig. 2]

**Figure 2: Common group of drugs used for self-medication by the medical students**

Mild nature of illness 308 (77.8%) was the commonest reason for self-medication. Others include previous experience with same illness 236 (59.6%), urgency 180 (45.4%), etc. Previous prescription 236 (59.6%), medical store 210 (53.0%) were common source of information for self-medication amongst others. The various advantages of self-medication as reported by the students include convenience 284 (65.9%), quick relief 238 (55.2%), followed by time saving and economical. Disadvantages of self-medication include incorrect dosage 284 (65.9%), wrong diagnosis 254 (58.9%), adverse drug reactions 233 (54.1%) and incorrect duration 222 (51.5%). 210 (48.7%) students favour self-medication. [Table 2]

### DISCUSSION

In this study, 91.9% of undergraduate medical students practice self-medication ever in their life out of which 90.4% practice self-medication in last one year. The previously published studies reported prevalence of self-medication among the medical students ranging to the lowest of 40.6% as per Bhatia MK et al <sup>7</sup> to the highest of 97.8% as per Al-Hussaini M et al. <sup>8</sup>

62.9% of the students were  $\geq 17$  years of age when they initiated self-medication, which means students have started this practice mostly after taking admission in a medical college while Sama S et al <sup>9</sup> reported that 68.4% students' age of initiation was  $< 18$  years. In the present study, most of the students practiced self-medication at a frequency of 1-5 times per year while Patil SB et al <sup>10</sup> observed that mostly student practice self-medication 2-3 times per year.

Fever was the most common symptom for which self-medication was practiced. Similar observation was made by other researchers in their study. <sup>11-15</sup> While in Patil SB et al, <sup>10</sup> Zardosht M et al, <sup>16</sup> and Shehnaz et al <sup>17</sup> URTI was the most common symptom and in Al-Hussaini M et al, <sup>8</sup> headache and Haroun MF et al, <sup>18</sup> bodyache was the commonest symptom for which self-medication was practiced.

In this study, mild nature of illness (77.8%) was the most common factor for self-medication. Similar observations were made in all the other studies except in Sunitha M et al <sup>19</sup> where previous experience with same illness and Nirmal TP et al <sup>20</sup> convenience was the most common reason for self-medication.

In the present study, the most common source of information for self-medication was previous prescription with same illness. Similar findings were also observed by other researchers. <sup>6, 14, 18, 21</sup> In some studies <sup>12, 15, 16</sup> authors reported pharmacists as the most common source of information. Pal J et al <sup>13</sup> reported internet, Kumar N et al <sup>14</sup> books, Nirmal TP et al <sup>20</sup> friends and Joshi DK et al <sup>22</sup> family as the commonest source of information for self-medication.

In this study, according to the students most common advantage of self-medication was convenience, while in Kasulkar AA et al <sup>15</sup> it was quick relief.

In this study, the most common disadvantage of self-medication was incorrect dosage, while in Pal J et al <sup>13</sup> it was wrong diagnosis.

In the present study, 48.7% students favour self-medication. Similar observation was made by Dilie A et al <sup>23</sup> while in different other researches self-medication was favoured ranging from 66% as per Sunitha M et al <sup>19</sup> to 70.5% as per Pal J et al. <sup>13</sup>

### LIMITATION

The questionnaire was self-administered to the student, so there may be falsification of statements made by them despite of being ensuring about their confidentiality of participation. Although the students were requested to complete the questionnaire independently, discussion between them could not be entirely ruled out. The study was done in only one medical college of the state, it could have been extended to other medical colleges and also could have been done in the community among non-medical personnel.

**CONCLUSION:** The prevalence of self-medication among the medical students is quite high though less than half of the students favour its practice. Responsible self-medication as suggested by World Health Organization for every individual should also be introduced in medical curriculum.

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