



**A STUDY TO ASSESS THE KNOWLEDGE, ATTITUDE AND PRACTICE ON OVER  
THE COUNTER DRUGS AMONG COLLEGE STUDENTS**

**Dr. Basavanna P. L. \*, Anagha Krishnadas, Anu Mariya Saji, Arman Arab, F. Lalanthangi, Manisha Devi**

Clinical Pharmacology, Mysore Medical College & Research Institute, Mysore, India.

**\*Corresponding Author: Dr. Basavanna P. L.**

Clinical Pharmacology, Mysore Medical College & Research Institute, Mysore, India.

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**ABSTRACT**

**Objectives:** A study to assess the knowledge, attitude and practice on over the counter drugs among college students. **Methods:** This cross-sectional observational study was carried out among college students in Mysore from March 2019-May2019. A total of 200 students were included in this study. Data was analysed using Microsoft excel and the results were presented using counts and percentages. **Results:** Among 200 students, 190 (95%) students were practising self-medication and 10 (5%) students were not practicing self-medication. Sources of self-medication were advice from pharmacist (38%), suggestions by friends or family (32%). The major conditions for adopting OTC drugs were headache (58.9%), followed by cough and cold (58.4%) and fever (54.7%). Among the drugs antipyretic and analgesics consumption was highest (96.3%) followed by antibiotics (64.2%), antacids (51.5%) and vitamin supplements (51%). It was observed that 36 students experienced adverse drug reactions like nausea and vomiting (7.3%), allergic reactions (4.7%) and constipation (4.7%). The most common reasons for self-medication were time saving (44%) and quick relief (24.2%). In our study majority of the students had a positive attitude towards self-medication. **Conclusion:** The prevalence of self-medication among students is quite high. Therefore, proper counselling and awareness should be created among the public regarding self-medication.

**KEYWORDS:** Self-medication, OTC drugs, adverse drug reactions.

**I. INTRODUCTION**

Over-the-counter (OTC) drugs are medicines sold directly to consumer without a prescription from health care personnel. OTC drugs selected by a regulatory agency to make sure that they are safe and effective when used without physician's care play an important role in our health care systems. However, self-medication involves certain risks.<sup>[1]</sup> Self-medication with OTC drugs is occasionally referred to as 'responsible' self-medication to differentiate it from the practice of purchasing and using a prescription medicine with doctor's prescription. This combined with poor community literacy about medication safety and usage, leads to misuse and overuse of medications in India. This in turn, can contribute to ill-health, public health; predicaments such as antibiotic resistance and further misery of community.<sup>[2]</sup> Common OTC drugs include antipyretic and analgesics, NSAIDs such as acetylsalicylic acid, aspirin, ibuprofen, and diclofenac, antacids, antihistamine, topical agents, vitamin supplements, eye or ear preparations and antibiotics.<sup>[3]</sup> Regardless of the benefits of over-the-counter (OTC) drugs there are risk associated with its use such as over dosage, prolonged duration of use, wastage of resources and increased resistance to pathogen<sup>[4,5]</sup>. OTC drugs also

have drug interaction with prescription and other drugs, can cause serious drug adverse reactions and even lead to death.<sup>[1]</sup> Rise in self-medication with OTC drugs is high in student population where unsafe use of antibiotics, analgesics, antacids and vitamin supplement are common. Abusing OTC drugs lead to health problems including memory loss, kidney failure, heart problems and death. The present study focuses on understanding the knowledge, attitude and practices of OTC drugs and the need to provide awareness regarding use of OTC drugs among students.

**II. MATERIALS AND METHODS**

This cross-sectional observational study was carried out among college students at Sarada Vilas Educational Institution, Basudev Somani College, MMK & SDM College For Women from March 2019-May2019. A total of 200 students (both male and female) aged between 18 – 30yrs were included in this study.

**Study design:** Cross sectional observational study.

**Study Location:** Sarada Vilas Educational Institution, Basudev Somani College and MMK& SDM College For women.

**Study Duration:** March 2019-May2019.

**Sample Size:** 200 students

#### Inclusion criteria

1. College students from 18 to 30 years old.
2. Both male and female students were included.
3. All students consuming and not consuming over the counter drugs were included.
4. Students who were willing to participate in the study.

#### Exclusion criteria

1. Students below the age of 18 and above 30 years.
2. Students, who were not present during study period.

#### Procedure Methodology

This study was an anonymous, questionnaire-based survey approved by the Institutional Ethics Committee of the colleges where the study was carried out. Students of both sexes were included in the study. A brief description of the nature of the study and the procedure of completing the questionnaire was explained to the students taking part in the study. Questionnaire was self-

developed and pre validated consisting of 20 closed ended questions. The information regarding use of OTC drugs, reason and indication for OTC drug use, list of drugs commonly used for self- medication, source of OTC drugs, adverse drug reactions, preference to self - medication and attitude of students regarding self - medication were included in the questionnaire.

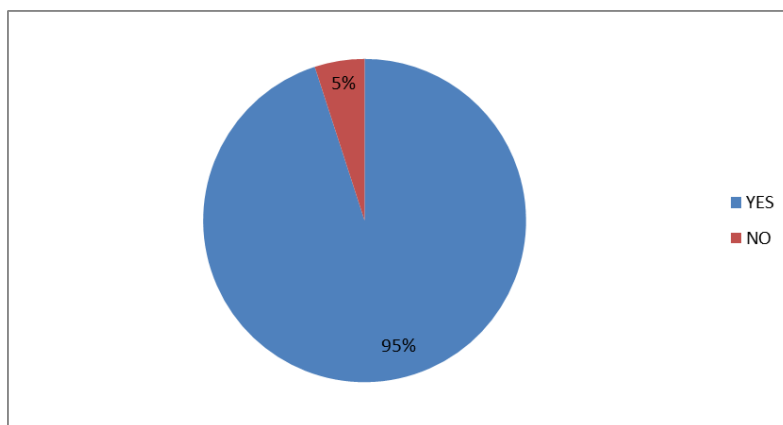
#### Statistical analysis

Data was analysed using Microsoft excel and the results were presented using counts and percentages. Some questions being multiple choices, some of percentages were not always 100%.

### III. RESULTS

A total of 200 students participated in the study of which 120 (60%) of the participants were female and 80(40%) were male.

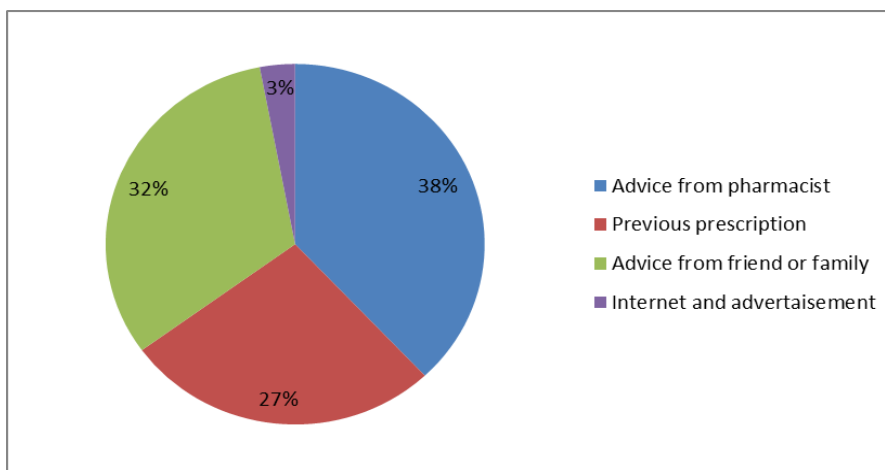
Figure no 1 shows the distribution of students practicing self -medication. Among 200 students, 190 (95%) students were practising self-medication and 10(5%) students were not practicing self- medication.



**Figure no 1: Distribution of students practicing self- medication.**

Figure no 2 shows the different source for receiving OTC drugs. Out of 190, 72 (38%) students took advice from pharmacist, 60 (32%) students were suggested by friends

or family, 52 (27%) students referred to their previous prescription and 6 (3%) students gathered information from internet or advertisements.



**Figure no 2: Sources for OTC drugs.**

Table no 1 depicts the various reasons for practicing self-medication among students. The major conditions for adopting OTC drugs were headache 112 (58.9%),

followed by cough and cold 111 (58.4%), fever 104 (54.7%) and acidity 98 (51.5%).

**Table no 1: Indication for self- medication.**

Indication	No of cases	Percentage
Headache	112	58.9%
Cough and cold	111	58.4%
Fever	104	54.7%
Acidity	98	51.5%
Nausea, vomiting and diarrhoea	32	16.8%
Menstrual symptoms	20	10.5%
Skin problems	18	9.4%
Eye and ear problem	18	9.4%

Different categories of medicine which were self-medicated for the treatment of ailments is listed in table no 2. Among the drugs antipyretic and analgesics consumption was highest (96.3%) by the students,

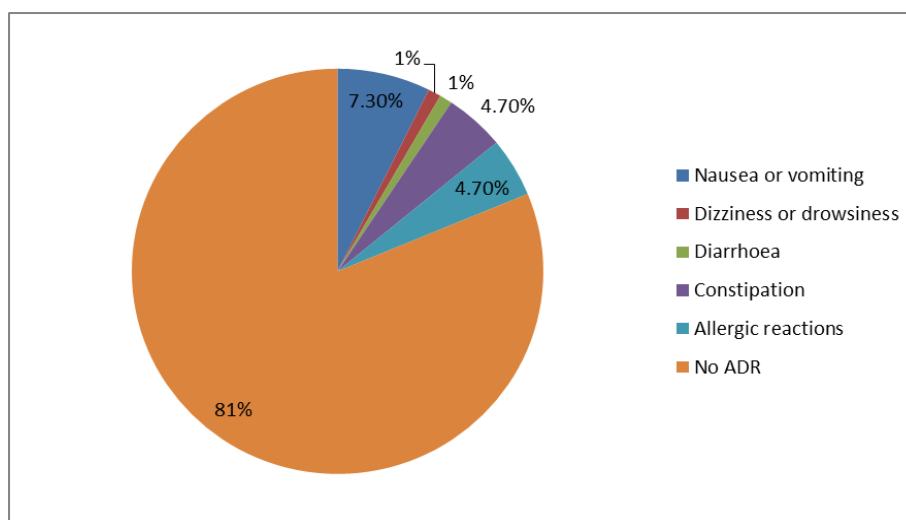
antibiotic (64.2%), antacids (51.5%), vitamin supplements (51%), antihistamine (36.8%) and NSAID's (34.2%).

**Table no 2: Common drugs used for self –medication.**

Drugs	No of cases	Percentage
Antipyretic and analgesics	183	96.3%
Antibiotic	122	64.2%
Antacids	98	51.5%
Vitamin supplement	97	51%
Antihistamine	70	36.8%
NSAIDs	65	34.2%
Topical creams, ointments, gels	24	12.6%
Eye and ear drops	18	9.4%

From the study, it was observed that majority of students (81%) did not experience any adverse drug reactions, whereas 36 students experienced adverse drug reactions

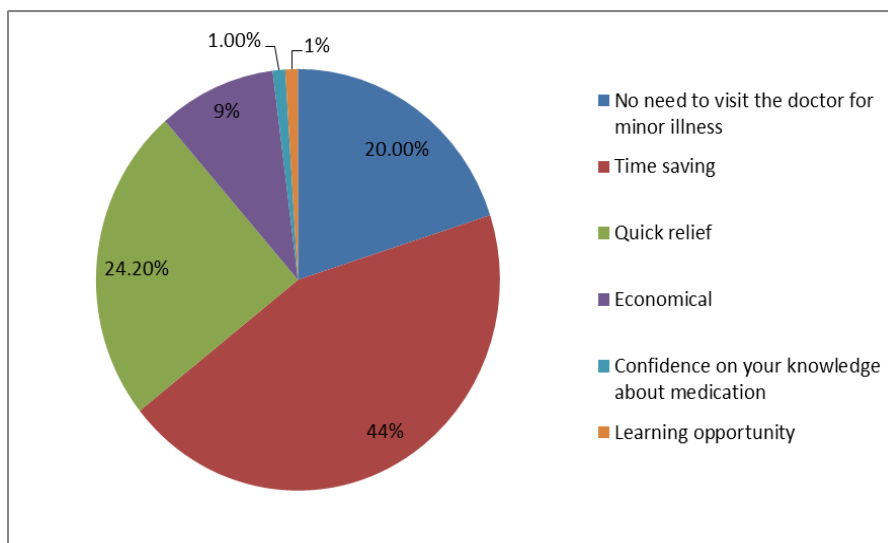
like nausea and vomiting (7.3%), allergic reactions (4.7%) and constipation (4.7%).



**Figure no3: ADR's experienced during self- medication.**

The various reasons for preferring self- medication have been depicted in figure no 4. The most common reasons given by the students were time saving (44%), quick

relief (24.2%) and no need to visit the doctor for minor illness (20%).



**Figure no 4: Preference to self- medication.**

Data regarding attitude towards self -medication was collected from 200 students, including those who did not practiced self -medication, the majority of students 97.5% agreed to check with the doctor if they are not sure about the self- prescribed drugs and 2.5% disagreed, 90.5% agreed to use non prescribed drugs for a short duration of time and 9.5% disagreed, 95% agreed that pharmacist are good source of information for minor

medical problems and 5% disagreed, 40.5% agreed that it is safe to use several drugs at same time if each one was prescribed for different symptoms on the other hand 59.5% disagreed, 33% students agreed that it was acceptable to give their prescription to someone with similar symptoms whereas 67% disagreed and 64% agreed that self- medication is part of self- care on the other hand 36% disagreed.

**Table no 3: Attitude of students regarding self- medication.**

Attitude	Agree	Disagree
If you are not sure about the self- prescribed drugs, you have to check with the doctor.	195 (97.5%)	5 (2.5%)
It is acceptable to use non prescribed drugs for a short duration of time.	181 (90.5%)	19 (9.5%)
Is it safe to use several drugs at same time if each one was prescribed for different symptoms?	81 (40.5%)	119 (59.5%)
Pharmacists are good source of information for minor medical problems.	190 (95%)	10 (5%)
It is acceptable to give your prescription to someone who had similar symptoms.	66 (33%)	134 (67%)
Self- medication is part of self- care	128 (64%)	72 (36%)

**IV. DISCUSSION**

In our study self-medication was found to be highly prevalent and being practised by 95% students. On other hand (5%) students did not practice self-medication .Similar result was found by Ramadan *et al.*<sup>[6]</sup> in which there was a high prevalence of self-medication among students.

Among 200 Students, the source of self-medication include advice from pharmacist (38%), suggestions from friends and family (32%), those referred to their previous prescription (27%)and internet and advertisement (5%). Synchronic results were obtained from Darshana *et al.*<sup>[7]</sup>

Table1. Indicates the condition for adopting OTC drugs which include Headache (58.9%), followed by cough and cold(58.4%), fever(54.7%), acidity(51%), nausea vomiting and diarrhoea(16.8%), menstrual symptoms(10.5%), skin problem(9.4%) and eye and ear problem(9.4%).Concurrent result where obtained by Renu *et al.*<sup>[8]</sup> and Mehta *et al.*<sup>[9]</sup> where the common indication for which students reported self-medication where headache (77%) followed by cough and cold (56%), fever (48%), gastritis (40%).

Table 2.Indicates the common drugs used for self- medications in which Antipyretic and Analgesics consumption was higher (96.3%) followed by Antibiotic (64.2%), Antacid (51.5%), vitamin supplements (51%),

Antihistamine (36.8%) and NASID's (34.2%). Comparable results were obtained in the study performed by Syed *et al.*<sup>[10]</sup> Badiger *et al.*<sup>[11]</sup> And Kumar *et al.*<sup>[12]</sup>

Fig no: 4 depicted the common reason given by the students for preferring self-medication which were time saving (44%), quick relief (24.2%) no need to visit the doctor for minor illness (20%), economical (9%), confidence on their knowledge about medication (1%) and learning opportunity (91%). Analogous results were observed in the study carried out by Banerjee *et al.*<sup>[13]</sup> and Hitesh *et al.*<sup>[14]</sup>

Among 190 students who practiced self-medication, 154 (81%) did not experience adverse drug reactions. On the other hand, 36 (18.9) students develop adverse drug reactions. Out of 36 students, 14 (7.3%) students complained about nausea or vomiting, 9 (4.7%) students experienced allergic reaction, 9 (4.7%) students experienced constipation, 1% students complained dizziness and drowsiness and 1% students experienced diarrhoea. Comparable adverse drugs reactions were seen in a study conducted by Sven *et al.*<sup>[15]</sup>

Out of 190 students 84 (44%) preferred self-medication for time saving, followed by 46 (24.2%) for quick relief, 38 (20%) for minor ailments, 18 (9%) for being economical, 2 (1%) for a learning opportunity and the other 2 (1%) for confidence on knowledge about medication. Comparable results were obtained in the study performed by Rashmi *et al.*<sup>[16]</sup> in which major advantages of self-medication was time saving (54%), no need to visit the doctor for minor illness (44%). Similarly a study conducted by Arti *et Al.*<sup>[17]</sup> observed that the reasons for self-medication quoted by respondents were minor ailments (55.4%) followed by quick relief (24.9%).

Data regarding attitude towards self-medication was collected from 200 students, including those who did not practiced self-medication, the majority of students 97.5% agreed to check with the doctor if they are not sure about the self-prescribed drugs and 2.5% disagreed, 90.5% agreed to use non prescribed drugs for a short duration of time and 9.5% disagreed, 95% agreed that pharmacist are good source of information for minor medical problems and 5% disagreed, 40.5% agreed that it is safe to use several drugs at same time if each one was prescribed for different symptoms on the other hand 59.5% disagreed, 33% students agreed that it was acceptable to give their prescription to someone with similar symptoms whereas 67% disagreed and 64% agreed that self-medication is a part of self-care on the other hand 36% disagreed. In our study majority of the students had a positive attitude towards self-medication. Comparable studies conducted by Alemseged *et al.*<sup>[18]</sup> concluded that 77% students agreed that practice of self-medication is a part of self-care while 22.5% students disagreed with this practice and 76% students agreed that pharmacist are good source of information for minor medical problems while 24%

disagreed. Similarly a study conducted by Kayalvizhi *et al.*<sup>[19]</sup> concluded that students had a positive attitude towards self-medication.

## V. CONCLUSION

The practice of self-medication among students is very high. Even though self-medication practice is unavoidable, drug regulatory authority and health care professional have a huge responsibility to control unsafe self-medication practice. Therefore, proper counselling and awareness should be created among the public regarding self-medication.

## VI. ACKNOWLEDGEMENT

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