

## STUDY ON KNOWLEDGE, ATTITUDE AND PRACTICE TOWARDS SELF-MEDICATION AMONG HEALTH SCIENCE STUDENTS IN KARNATAKA, INDIA

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### ABSTRACT

**Background:** Self-medication is defined as obtaining drugs without medical supervision either for treatment, diagnosis, or prevention of a disease that may lead to various risks such as wasteful expenses, drug resistance, and adverse drug reaction. **Objective:** To assess the knowledge, attitude, and practice towards self-medication among health science students. **Materials and Methods:** A prospective cross-sectional study was conducted among 200 students at selected pharmacy and nursing colleges in Tumkur to assess knowledge, attitude, and practice regarding self-medication. Data were collected, analyzed, and interpreted by using descriptive statistics. **Results:** Out

of the total 200 participants 112(56%) were Pharmacy students and rest 88(44%) were Nursing students and 136 (68%) were females and 64 (32%) were males. When comparing the mean correct response of knowledge, attitude, and practice on self-medication, nursing students have given a more correct response on knowledge (67.6%) attitude (55.97%) and practice (45.8%) than pharmacy students. **Conclusion:** The study result revealed that self-medication is commonly practiced among both the pharmacy and nursing students and students were aware of some aspects of self-medication. Though self-medication is difficult to avoid, certain interventions like further health education programs can be launched to increase awareness among students about the pros and cons of its use.

**KEYWORDS:** Self-medication, knowledge, attitude, practice, pharmacy students, nursing students.

## INTRODUCTION

World Health Organization (WHO) defines self-medication as the use of medicinal products by the consumer to treat self-recognized disorders of symptoms, or the intermittent or continued use of the medication prescribed by the physician for chronic or recurring diseases or symptoms, or use of medication recommended by family members or health workers not entitled to prescribe medicine.<sup>[1]</sup>

To use the medicinal products safely and effectively, the consumer must perform several functions usually carried out by a physician treating a patient with a prescription drug. These functions include accurate recognition of symptoms, setting of therapeutic objective, selection of a product to be used determination of appropriate dosage and frequency, a person's medical history contraindication concurrent medications and concomitant diseases, and if possible adverse drug reactions (ADR).<sup>[1]</sup>

WHO also explains that SM helps to treat and prevent illness that does not require medical supervision and can provide a cheaper alternative for treating common illness.<sup>[2]</sup> SM is practiced worldwide because many drugs are dispensed over the counter (OTC) without prescription and it provides a low-cost alternative for the public.<sup>[2]</sup> SM is often influenced by age, gender, family, society, medical knowledge, self care, orientation and drug advertisements.<sup>[3]</sup>

SM with OTC plays a major role in self-care making individuals make independent decisions regarding their health. OTC drug availability enables the public to take responsibility and builds confidence to manage their health<sup>[4]</sup> however OTC products are a public health problem and are more experienced in developing countries.<sup>[5]</sup> Many of the pharmaceutical companies contribute to the widespread availability of OTC medicine and there is also a potential misuse and abuse of such products.<sup>[6]</sup> Although most of the countries categorize medicines as either OTC or prescription-only, research data indicate that the sale of self-prescription products is far more common than the sale of OTC drugs.<sup>[7]</sup>

The concept of rational drug use is inherent to the issue of SM. Halophytes the Alexandrian physician in 300 BC had very well said that medicines are nothing in them, but are the very hands of God if employed reasons and prudence.<sup>[8]</sup>

SM is a very common problem and several reasons could be specified for it. Self-care, lack of time, lack of health services, financial constraint, ignorance, misbelieves, extensive advertisement, and availability of drugs other than drug shops are responsible for the growing end of self-medication.<sup>[9]</sup>

The increase in self-medication is due to various factors such as socio-economic factors, lifestyle, ready access to drugs, the increased potential to manage certain ailments through self-care, public health and environmental factors, greater availability of medicinal products, and demographic and epidemiological factors.<sup>[10]</sup>

## **MATERIALS AND METHODS**

### **Study site**

The study was conducted at selected Pharmacy and Nursing colleges in Karnataka, India.

### **Duration of study**

The study was conducted over six months.

### **Study design**

Prospective cross-sectional study.

### **Study population**

A total of 200 students were involved in the study.

### **Study criteria**

The study was conducted by considering the following inclusion and exclusion criteria.

#### **Inclusion Criteria**

Undergraduate and Diploma students from Pharmacy and Nursing.

Those who are willing to participate in the study.

#### **Exclusion Criteria**

Postgraduate students

Clinical and other health-care professional students

#### **Data Collection**

A self-prepared questionnaire adapted and modified from previous studies<sup>[3,11]</sup>, were designed and validated by pharmacy faculties for their appropriate application in the study population.

### Study Procedure

The first section of the questionnaires highlighted demographic data (department, gender, and accommodation). The second, third, and fourth sections were addressed to assess the knowledge, attitude, and practice respectively about self-medication by providing questions with the options 'agree', 'disagree', 'neutral', 'yes', and 'no'. The data collected were analyzed using descriptive statistics namely percentages and mean values. Microsoft word and excel have been used to produce graphs and tables. The results were expressed as a mean correct response or percentage of correct response by the study population for assessing their knowledge, attitude, and practice about self-medication.

### Statistical Analysis

Simple descriptive statistics were used to produce results in percentages and mean values.

### Ethical Approval

The study was approved by the Institutional Ethics Committee of Sree Siddaganga College of Pharmacy, Tumkur.

(Reference No: SSCPT/SHRC/PPD/2019-20)

### RESULTS

The study was carried out in 200 health science students, in which 112 (56%) were pharmacy students and the rest 88 (44%) were nursing students. The age of the students was below 22 years for both pharmacy and nursing students. Out of 200 students, 136 (68%) were females and 64 (32%) were males. There are more females among nursing students when compared to pharmacy students. Most of the subjects 135 (67.5%) were accommodated in the hostel (Table1).

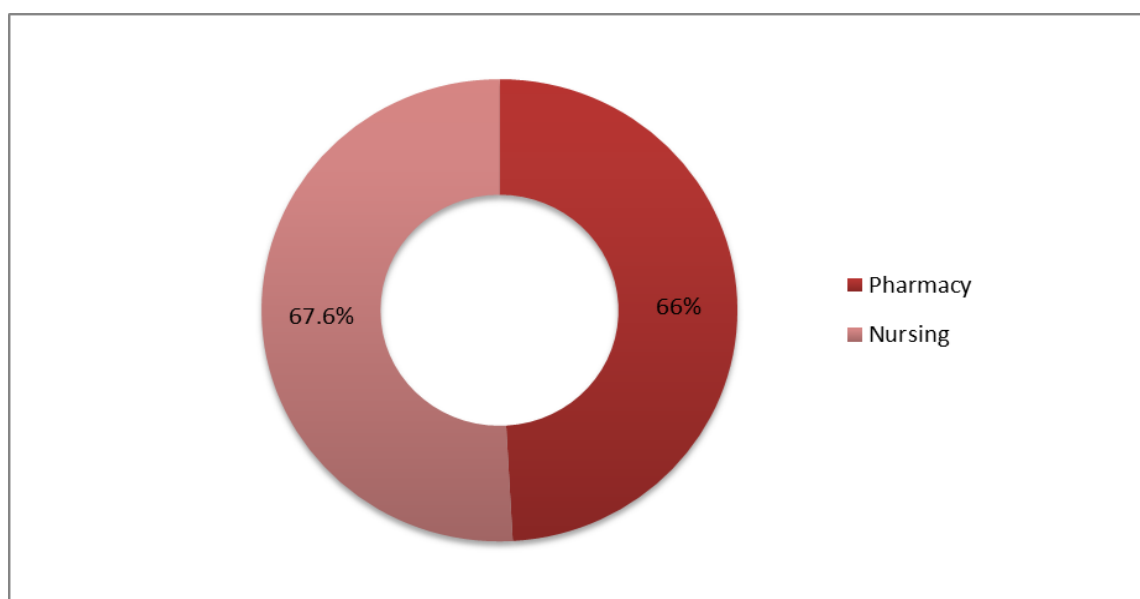
**Table 1: Demographics of the participants.**

CHARACTERISTICS	N (%)
<b>Department</b>	
Pharmacy	112(56%)
Nursing	88(44%)
<b>Gender</b>	
Male	64 (32%)
Female	136(68%)
<b>Accommodation</b>	
Home	65(33%)
Hostel	135(67%)

### Assessment of Knowledge on Self-medication among students using questionnaires

The majority of the students (66.9% of Pharmacy students and 65.8% of Nursing students) knew that self-medication is medications consumed by ourselves without medical supervision and only a few (31% of Pharmacy students and 31.2% of Nursing students) of them stated self-medication as medications that are prescribed by the physician. 72% of pharmacy students and 69.8% of nursing students agreed that self-medication is not safe whereas (25% of Pharmacy students and 30.3% of nursing students) had disagreed regarding the same. Moreover, 63.3% of Pharmacy students and 74.6% of nursing students were cautious about the dependency and addictive effect of Self-medication.

However, when comparing the mean correct response of knowledge on Self-medication by the Pharmacy and Nursing students, nursing students had given more correct responses (67.6%) than Pharmacy students (66%).(Fig:1)



**Fig 1: Mean correct response of knowledge on self-medication.**

**Table 2: Knowledge on self-medication.**

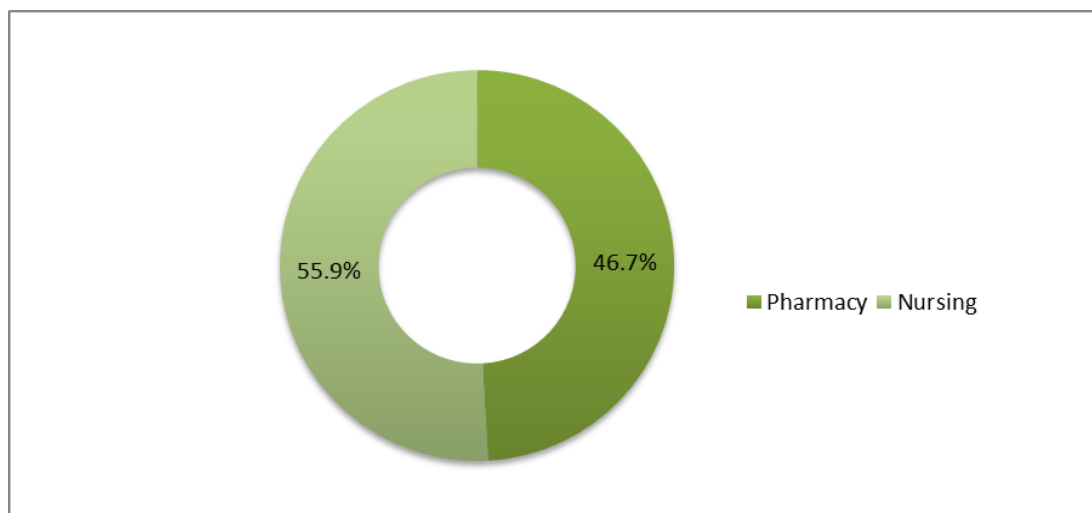
Question	Answer	Pharmacy n=112(N%)	Nursing n=88(N %)
View on Self-medication definition	Prescribed by Physician	34 (31%)	27(31.2%)
	Consumed by ourselves	74(66.9%)	57(65.8%)
	All of the above	2 (2%)	2(3%)
Adequate knowledge about drugs is essential	Agree	73 (65.2%)	58(67%)
	Disagree	28(25.6%)	25(29.4%)
	Neutral	10 (9.2%)	3(3.6%)
Self- medication is not safe	Agree	80 (72%)	61(69.8%)

	Disagree	28(25%)	2(30.2%)
	Neutral	3(3%)	0(0%)
Self- medication leads to incorrect drug selection and ADR	Agree	68(60.9%)	55(63.6%)
	Disagree	41(36.7%)	32(36.4%)
	Neutral	2 (2.4%)	0(0%)
Does not interfere with food or alcohol	Agree	36 (32.3%)	30(35%)
	Disagree	75.3(67.7%)	57(65%)
	Neutral	0 (0%)	0(0%)
Continuous use causes dependency or addiction	Agree	70(63.3%)	65(74.6%)
	Disagree	36(32.7%)	20(23.4%)
	Neutral	4(4%)	1(2%)

### Assessment of attitude towards self-medication among students using questionnaires

Following attitude towards self-medication majority of the students (57.95% of Nursing students and 58% of Pharmacy students) stated that self-medication is a part of self-support. 72.72% of Nursing students gave the positive impact that self-medication is not advisable to others whereas 51.7% of Pharmacy students gave a negative impact on the same moreover 54.5% of the Nursing students and 51% of Pharmacy students agreed that advice cannot be taken from others.

Regarding the mean correct response of attitude towards self-medication among students, Nursing students responded more accurately (55.97%) than the pharmacy students (46.78%). (Fig2).



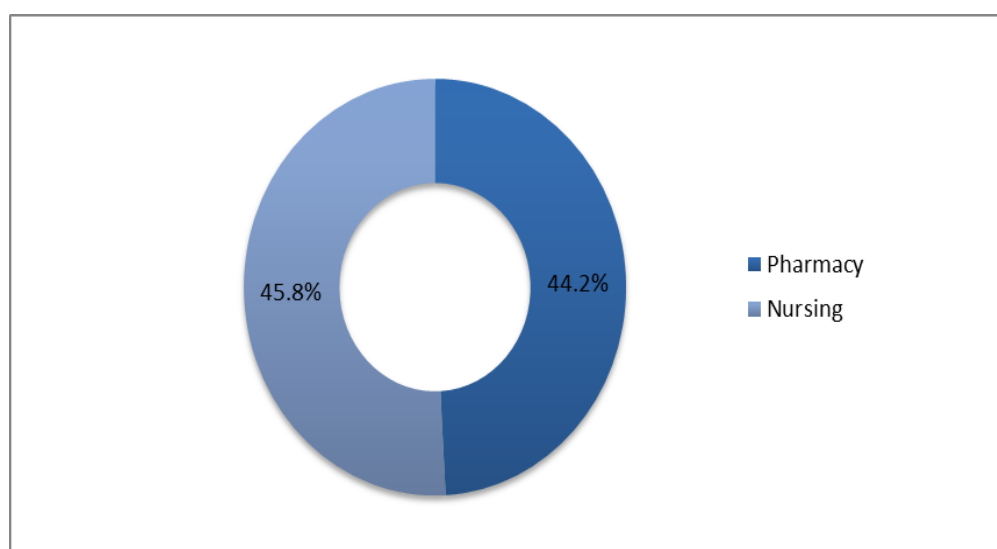
**Fig 2: Mean correct response of attitude on self-medication.**

**Table 3: Attitude towards self-medication.**

Question	Answer	Pharmacy n=112 (N %)	Nursing n=88 (N %)
Self-medication is a part of self-support	Yes	65(58%)	51(57.95%)
	No	47(41%)	37(42.04%)
Self-medication need monitoring	Yes	54(50.8%)	36(40.90%)
	No	58(51.7%)	52(50.09%)
Self-medication is advisable to others	Yes	57(50.8%)	24(27.2%)
	No	55(49.1%)	64(72.7%)
The advice can be taken from others	Yes	57(50.8%)	40(45.4%)
	No	55(49%)	48(54.5%)
Should be careful with self-medications	Yes	62(55.3%)	61(69.3%)
	No	50(44.6%)	27(30.6%)

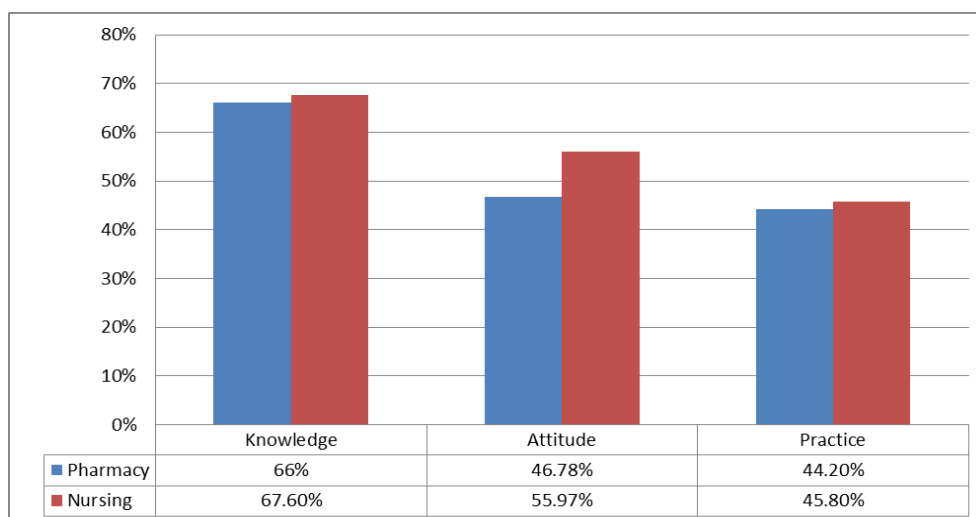
**Assessment of practice towards self medication among students using questionnaires**

Concerning the practice of self-medication majority of nursing students (63.86%) preferred to take self-medication when compared to (61%) pharmacy students, whereas 78.5% of pharmacy students and 62.5% of nursing students had considered self-medication as their primary care treatment. The expiry date on the medicine was checked by 66% of the pharmacy students and 33% of nursing students and the leaflet was read by 73% of the pharmacy students and 62.1% of the nursing students before using it for self-medication. Regarding the mean correct response of attitude towards self-medication among students, nursing students responded more correctly (45.8%) than the pharmacy students (44.2%). (Fig:3)

**Fig 3: Mean correct response of practice on self-medication.**

**Table 4: Practice towards self-medication.**

Question	Answer	Pharmacy n=112 (N %)	Nursing n=88 (N %)
Ever preferred to take a self-medication	Yes	80(71%)	65 (73.86%)
	No	32(28.8%)	23 (26.1%)
Self-medication is your primary care	Yes	88(78.5%)	55 (62.5%)
	No	24 (21%)	33 (37.5%)
Ever brought a drug without prescription	Yes	72 (64%)	62 (70.4%)
	No	40 (35%)	26 (29.5%)
Do you check the expiry date before using a drug	Yes	75 (66%)	54 (65.3%)
	No	37 (33%)	34 (34.7%)
Do you read the leaflet before taking a medication	Yes	82 (73%)	48 (62.1%)
	No	18 (16%)	40 (37.9%)
Ever shared a prescription who have similar symptoms	Yes	21 (18%)	33 (37.5%)
	No	79 (70%)	55 (62.5%)
Ever used the same medication for the same symptoms	Yes	82 (73%)	59 (67.04%)
	No	18 (16%)	29 (37.9%)

**Fig 4: Mean correct response of knowledge, attitude, and practice towards self-medication.**

## DISCUSSION

Self-medication is a practice in which individuals treat their illness and conditions with medicines that are approved and available without a prescription, and which are safe when used as directed. However, it will lead to unintended effects when used inappropriately.<sup>[12]</sup>

Many studies revealed that socioeconomic factors, lifestyle changes, ready access to drugs, increased potential to manage certain illnesses and greater availability of medicines are the major factors that lead to an increase in self-medication.<sup>[13]</sup>



Our study aims to assess knowledge, attitude, and practice towards self-medication among Health Science students. Concerning the demographic characteristics, most of the respondents were females 136(68%) and 64 (32%) were males less than 22 years of age moreover most of the subjects 135(67.5%) were living in the hostel however this criterion is not considered as an assessment tool.

The study revealed that nursing students had given more correct responses regarding knowledge, attitude, and practice towards self-medication when compared to pharmacy students however this is in contrast with that of a similar study<sup>[14]</sup> conducted in Maharashtra where pharmacy students showed a more positive attitude and good knowledge towards self-medication.

About 66.35% of the respondents had very good knowledge about the definition of self-medication based on knowledge scaling whereas the lesser number of students (34.6%) only knew in a study conducted in Ethiopia.<sup>[15]</sup> The majority of the students of the study reported that they were aware of the adverse effects of medicines used by them which are analogous with the findings of other investigators.<sup>[16,17]</sup> Self-medication was considered to be safe by many Pharmacy students in comparison to nursing students. This could be because pharmacy students are aware of the pros and cons of the drugs.

The majority (51.37%) of the respondents had a positive attitude towards self-medication and favored self-medication. This was comparable with the study done in Gander University which is 55.5 %<sup>[13]</sup> and study at Mekelle University (52.3%)<sup>[18]</sup> but relatively lower in the study done in Jimma University.

In the present study, 57.9% of the subjects felt that self-medication was a part of self-support that was comparable to that reported by other studies<sup>[19, 20]</sup> but much lower to that reported by Ethiopian<sup>[18]</sup> researchers. Most of the subjects responded that self-medication doesn't need monitoring even after the administration of the drug. The use of self-medication reflected the fact that more nursing students disagreed with the statements that self-medication advice can be given to others and advice can be taken from others.

A positive finding as a good behaviour among students was that most of them (66.6%) were conscious about the expiry date of drugs and used them only after reading the leaflet

provided. The observations regarding reading the leaflets and, expiry date, and other instructions are under earlier studies.<sup>[17, 21]</sup>

The findings exhibit that among the health science students there is a lack of awareness about self-medication. Therefore, an educational intervention has to be implemented to improve their approach to self-medication use.

## CONCLUSION

The study has given insight regarding knowledge, attitude, and practice towards self-medication among Pharmacy and Nursing students. Even though self-medication is commonly practiced among both the pharmacy and nursing students the result of the study shows that nursing students had a better view on knowledge, attitude, and practice when compared to Pharmacy students hence awareness programs are a better choice to improve their approach towards self-medication. Though self-medication is now increasingly being considered as a part of self-care, there is a need for educational programs to educate about disadvantages and possible complications which can arise due to self-medication.

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## CONFLICT OF INTEREST

There is no conflict of interest in this work.

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