



PREVALENCE OF SELF-MEDICATION AMONG PHARMACY AND ENGINEERING STUDENTS

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INTRODUCTION

According to WHO self-medication is defined as used to treat the disease or symptoms for self-use only. Worldwide Self- medication uses to treat the common illness without consulting of physicians. This practice needs participation from pharmacist and medical professions [1]. The need of self-medication was having medication information. Mainly this self-medication is need for poor people who can't afford by using elemental knowledge of Self-medication will be obtained from pharmacist, doctor or others health care professionals. By using elemental knowledge of Self-medication will be obtained from pharmacist, doctor or others health care professionals [2]. Self-medication has traditionally been defined as the taking of drugs, herbs or home remedies on own initiative or on the advice of another person, without consulting doctor [3]. Major problems related to self-medication are wastage of resources, and increased resistance of pathogens and causes serious health hazard such as adverse reaction and prolonged suffering [1]. Main source of self-medication are relatives, friends, pharmacists who not only provide medicines but also the information about drugs use [1]. At the same time several factors like lack of access to health care, physician fees, time constraint, lack of trust on physician, inadequate implementation of drug laws have been shown to influence self-medication behavior [4]. Several studies have indicated that inappropriate self-medication results in adverse drug reactions, disease masking inaccurate diagnosis of disease, increase morbidity, drug interactions, antibiotic resistance and wastage of health care resources [5]. In developing countries, self-medication is the commonest chosen pathway, the underlying reasons are inadequate health care, poverty, illiteracy, drug abuse, poor access to health services due fewer trained physicians and easy availability of traditional herbal medicines [6]. Cost has been sighted as a major reason why many low incomes households opt for the selfcare option. The economic, health, social, and other impacts of self-medication qualify it has a public health problem. Self-medication has a substantial impact on public health with growing practice, it is helpful to integrate global self-medication data [6]. It gives comprehensive information regarding prevalence sample populations, medications used targeted disease and reasons for self-medication. The possibility of self-medication is higher in health sciences students than other students because of easy access to drug information resources and relatively sufficient familiarity with various kinds of drugs [8]. The current study was aimed to determine the prevalence of self-medication and its

related factors among the health sciences students. Self-medication includes acquiring medicines without a prescription, resubmitting old prescriptions to purchase medicines, sharing medicines with relatives or members of one's social circle.

METHODOLOGY

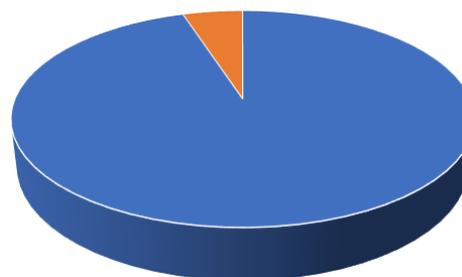
The cross-sectional study was conducted among pharmacy and engineering college students in A.M Reddy memorial college was located in petturivaripalem affiliated to ANU University. It was designed in the form of survey. The duration of study was four months i.e., January 2023- April 2023.

1.1. Eligibility criteria

The study should be conducted in pharmacy and engineering college of AMRMCP. In this study between 18-21 age of students will be participated. Marital status has been excluded in this study. Who are willing to fill the Self-medication form those students can be participated. Who are not willing to fill the Self-medication form they don't force them to fill. Study should be conducted at 10.00 AM to 4.00 PM onwards. Absent of student's information not mentioned in this study.

Sample size and sampling procedure:

The questionnaire was distributed among participants. Students were approached in their lectures and class time. The number of students enrolled in pharmacy and engineering students were 400 and 600 respectively. The confidence level of Self-medication in pharmacy students is 95% and fear to take Self-medication is 5%. The confidence level of Self-medication in engineering students is 45-50%. The confidence level of Self-medication in pharmacy students is 95% as shown in the figure 1. The study employed for the purpose sampling to assess the information from the students. This total data should be calculated through online. The survey was completed by collecting data from 1000 students' response.



Graph 1 Shows Confidence Level Of Self-Medication In Pharmacy Students

Research instrument

A questionnaire was prepared by discuss the available articles. It was prepared in the English language; it was the language of instruction at AMR college. Few of the discussion questions was include form the investigation instrument developed by students with permission. The total 35 questionnaires are prepared in this form and they are split into two groups, and comprises of 33 closed ended and 2 open ended questions. The categories of variables observed were demographics of students details like age, gender, course, name, and past illness and these are included in group-1. In group-2 Self-medication information included in questionnaires such as frequency of medication (rarely, frequently), source of information (pharmacist, physician, friends), place of obtaining medications (pharmacy stores, home remedy), symptoms (headache, fever, cold, vomiting), type of medication used such as Antibiotics; (Amoxyllin, Azithromycin) Anti pyretic; (Paracetamol), cold (Chloro phenyl amine maleate, Inhalers), Cough; (Kuff Q, Benadryl, Deriphyllin), Headache (Diclofenac, aceclofenac, paracetamol), Vomiting's; (ondansetron, domperidone) Diarrhoea; (Metronidazole, loperamide), Body pains; (Diclofenac, aceclofenac, aspirin, paracetamol) (Ondansetron, domperidone), Eye drops; (Yes/No) • Ear drops; (Yes/No) Topical use; (Ointments, creams, gels, sprays, powders, patches), Abdominal pain: (Meftal, trapic-mf), Any side effects observe while using self-medication. (Yes/No). In group-3 attitude towards self – medication practice include such as Reasons in favour of self-medication practice, (Reduce mild problems, Previous experience, SM practice as taking active role in managing my health, I am not sure), Reasons against self-medication practice (Lack of trust on prescriber, Fear of taking medication, Risk of side effects, Lack of medical knowledge, I am not sure) , Advice to others regarding self-medication (I am always in favour of SM practice, I am always against SM practice), Did you suggest any medication to others- (yes/no).

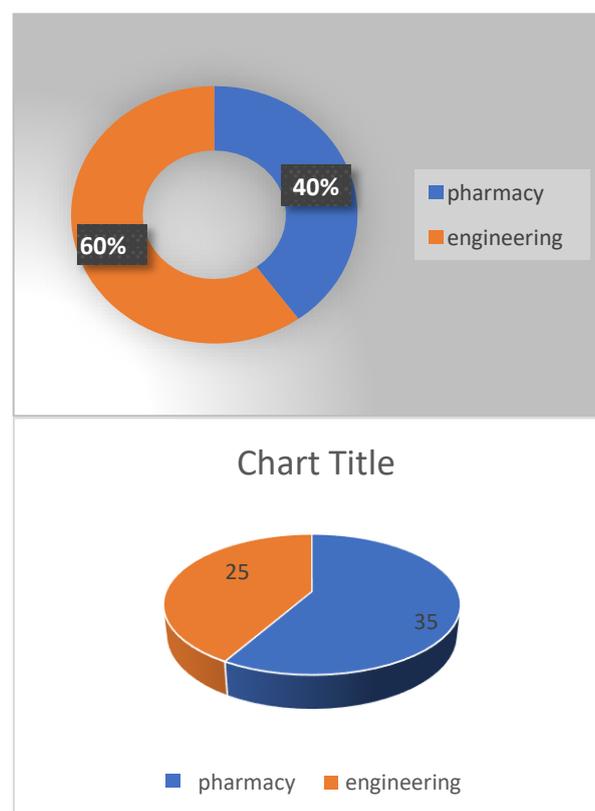
Piloting and validation process:

The questionnaire was first presented to a students and pharmacists. Based on their recommendations the demographic information was added in section 1. For this purpose, questionnaires provided to students about Self -medication were added in section 2. The questionnaire was then piloted in 1000 students of A.M Reddy Group of Educational society campuses. A.M Reddy memorial college of pharmacy affiliated to ANU(G) Approved by PCI Petlurivaripalem, Narasaraopet, 522601, Palnadu.

A.M Reddy memorial college of engineering and technology. Affiliated to JNTU (Kakinada), AICTE, Petlurivaripalem, NRT.

Results

The study comprises in students from pharmacy and engineering college. Out of 1000 Students are randomly Selected, collected the information get a growth response rate of 100%. We have divided into two groups from pharmacy college wise response growth of 40% and from engineering were observed rate of the growth of 60% as shown in figure 2.1. 35 survey questionnaires were given to pharmacy students and 35 were collected as shown in figure 2.2. Out of 35 questionnaire was received from pharmacy students because they have more knowledge about Self-medication. Out of 35 questionnaires engineering students given only 25 information because they have lack of medical knowledge.



Graph Shows Growth Response Rate. 2.3 Graph Shows Questionnaires Received.

DEMOGRAPHIC INFORMATION:

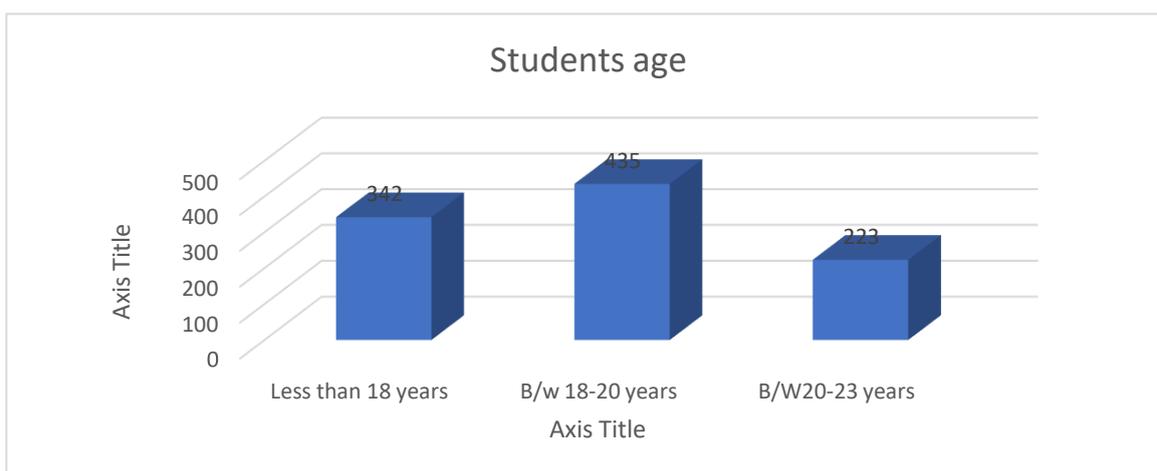
In demographic information of students age was differentiated into three parts among then less than 18 years N=342[34.2%] between 18-20 years 435[43.5%] between 20-23 years 223[22.3%] as shown in figure 2.3. In terms of gender females are more than males their number 504 [50.4%] most of the students' number 661[66.1%] was from engineering and diploma students remaining 339 [33.9] students from pharmacy.

According to year wise most of the students in -1st year 323 [32.3%]
 2nd year 256 [25.6%]
 3rd year 179 [17.9%]

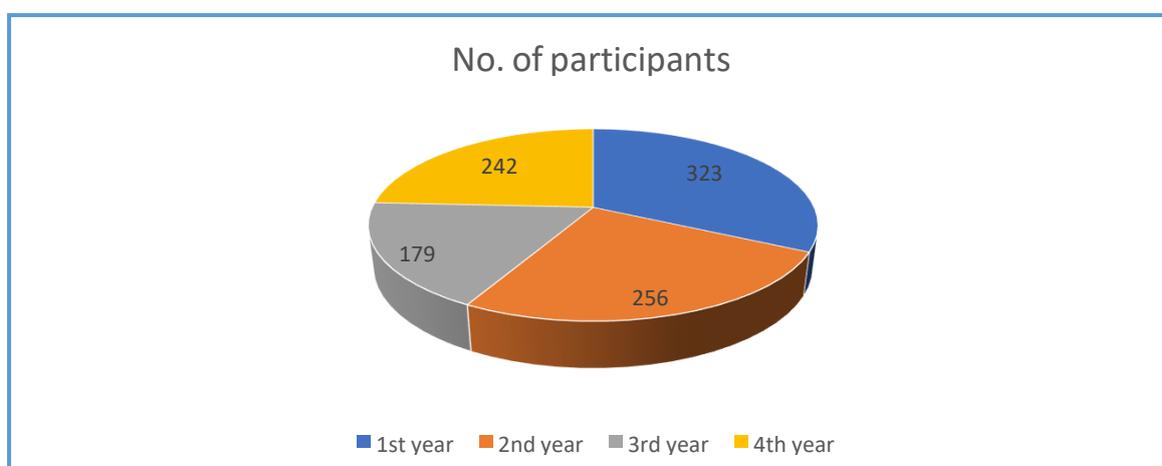
4th year 242 [24.2%] as shown in graph 2.4.

From among these 1st year students are more, most of the students didn't have any illness they are healthy.

Demographic information (N=1000)	Sample (N=%)	Percentage (%)
Age	342	34.2%
Less than 18 years	435	43.5%
Between 18-20 years	223	22.3%
Gender	496	49.6%
Male	504	50.4%
Collage	661	66.1%
Engineering & Diploma	339	33.9%
Preparatory year	323	32.3%
1 st year	256	25.6%
2 nd year	179	17.9%
3 rd year	242	24.2%
4 th year	242	24.2%
Illness		
Diabetes	20	2.0%
Hypertension	25	2.5%
Asthma	100	10%
None	855	85.5%



GRAPH 2.3 shows the student's age

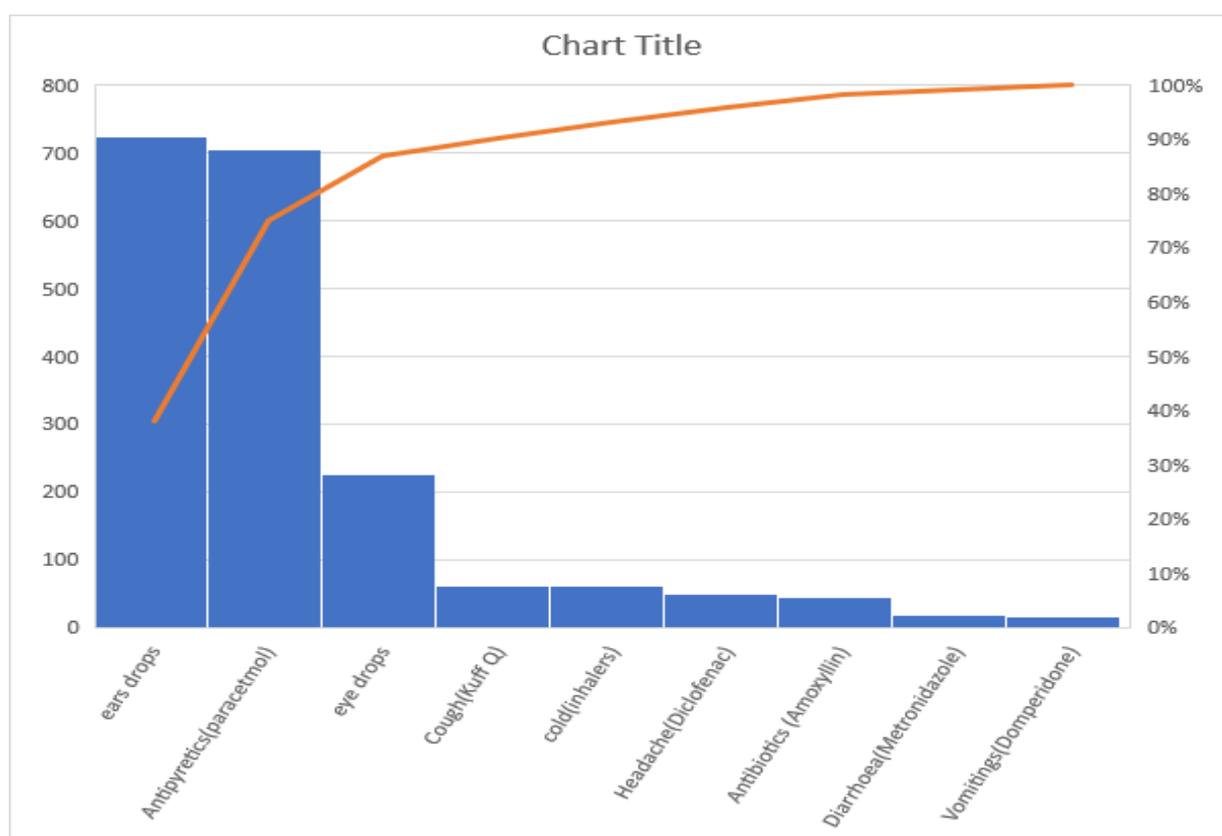


GRAPH 2.4 shows the preparatory years

SELF-MEDICATION INFORMATION:

The respondents were asked if they satisfy in self-medication. All the 1000 students are response positively towards self-medication. The major part of students is 554 [55.4%] rarely satisfied [once a month] in the practice, followed by a small part 187 [18.7%] members that repeatedly once every two weeks satisfied in self-medication. The total prevalence of self-medication in the total sample among pharmacy and engineering students combined was 1000 members. The prevalence of self-medication among pharmacy students only was reported as 400 members and engineering students were 600 members. Major part of students 177 [44.25%] obtained information from pharmacists and also collecting information from physician [31.5%]. Almost of the students 74.4% used non-prescription drugs. A massive major part of get medication for self-use from pharmacy store 750 [75%] followed by proportion indicating availability of medicine in home remedy 200

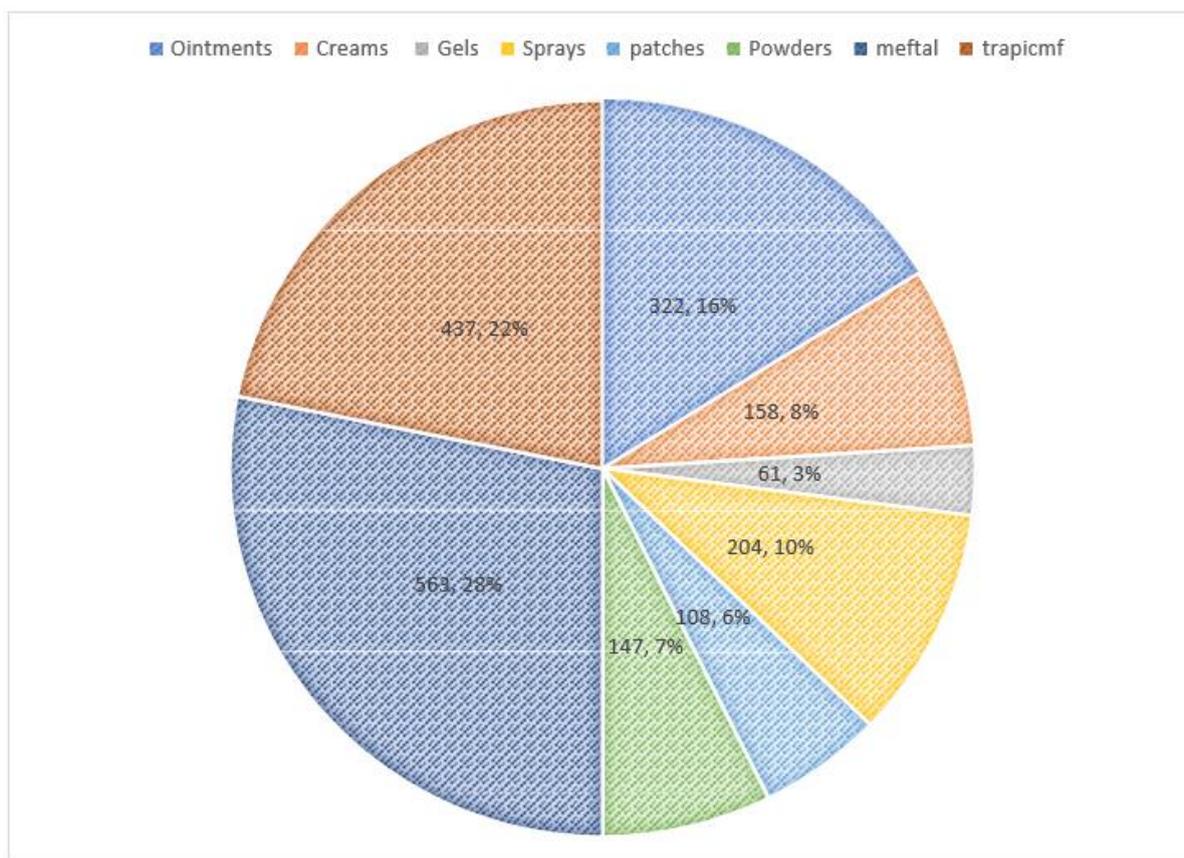
[20%] the most of the common symptoms faced by students that are headache, pain, cold, cough, fever, rashes, etc. cold 296 the major part of the students maintained more than one symptom and few 297 [29.7%] did not experience any symptoms that immediate them self-medication 300 [30%]. The prevalence of antibiotics which contains amoxyllin, azithromycin, was reported 400 [40%] antipyretic like paracetamol 750 [75%], cold drugs like chloro phenyl amine maleate 242[24.4%], inhalers, 346 [34.6%], cough drugs like Kuff-Q 82 [8.2%], Benadryl 121[12.1%] deriphyllin 78 [7.8%], body pains drugs like Diclofenac 234 [23.4%], Aceclofenac 67 [6.7%] aspirin 30[3.0%], Paracetamol 200 [20%]. vomiting drugs like Ondansetron, 29(2.9%), Domperidone 32 (3.2%), Diarrhoea 71(7.1%), Metronidazole 47(4.7%), Eye drops 226(22.6%), Ear drops 724 (72.4%) as shown in graph 2.5.



GRAPH 2.5 shows prevalence of drugs usage in students

For topical administration ointments are 322 (32.2%), creams 158(15.8%), Gels 61(6.1%), Sprays 204 (20.4%), Powders 147(14.7%),

Patches 108(10.8%) and for abdominal pain is Mefal is 563 (56.3%), traptic mf is 437 (43.7%) as shown in figure 2.6.



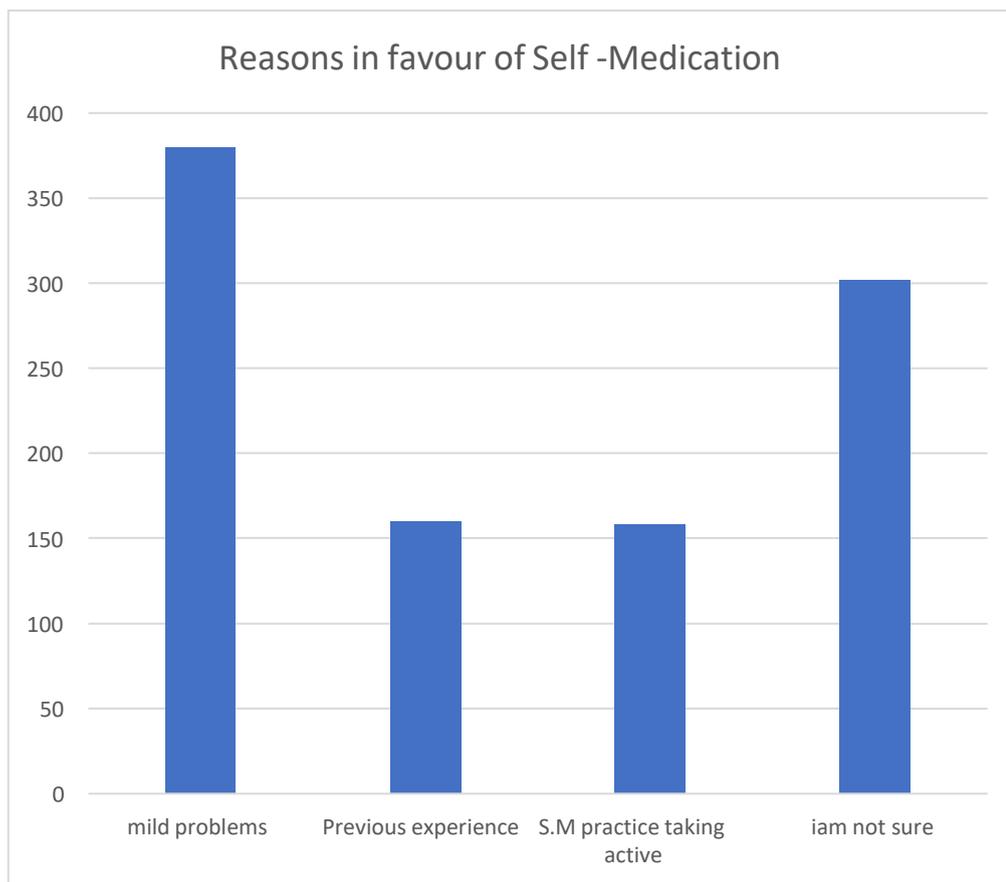
GRAPH 2.6 shows prevalence of topical administrations

Attitude Towards Self-medication Practice:

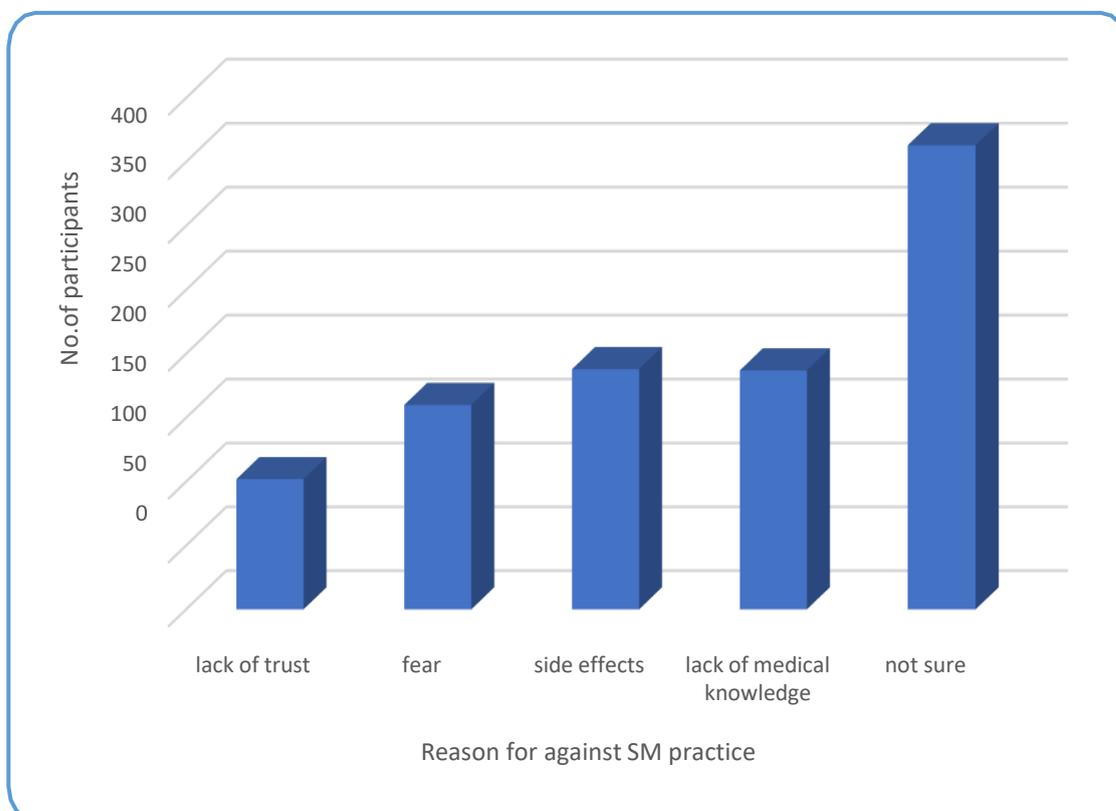
All 1000 students are responded positively towards Self-medication practice. Most of the students choose Self-medication to reduce mild problems as shown in fig 2.7. Some of the students are choose the Self-medication with their previous experience. Some of them felt by taking Self-medication were taking active role in managing my health. Some of

them have any reasons for against Self-medication practice as shown in figure 2.8. Some of the students are advices to others about Self-medication. Most of the students are favorable regarding Self- medication. Some of the students are suggest the medication to others as shown in figure 2.9.

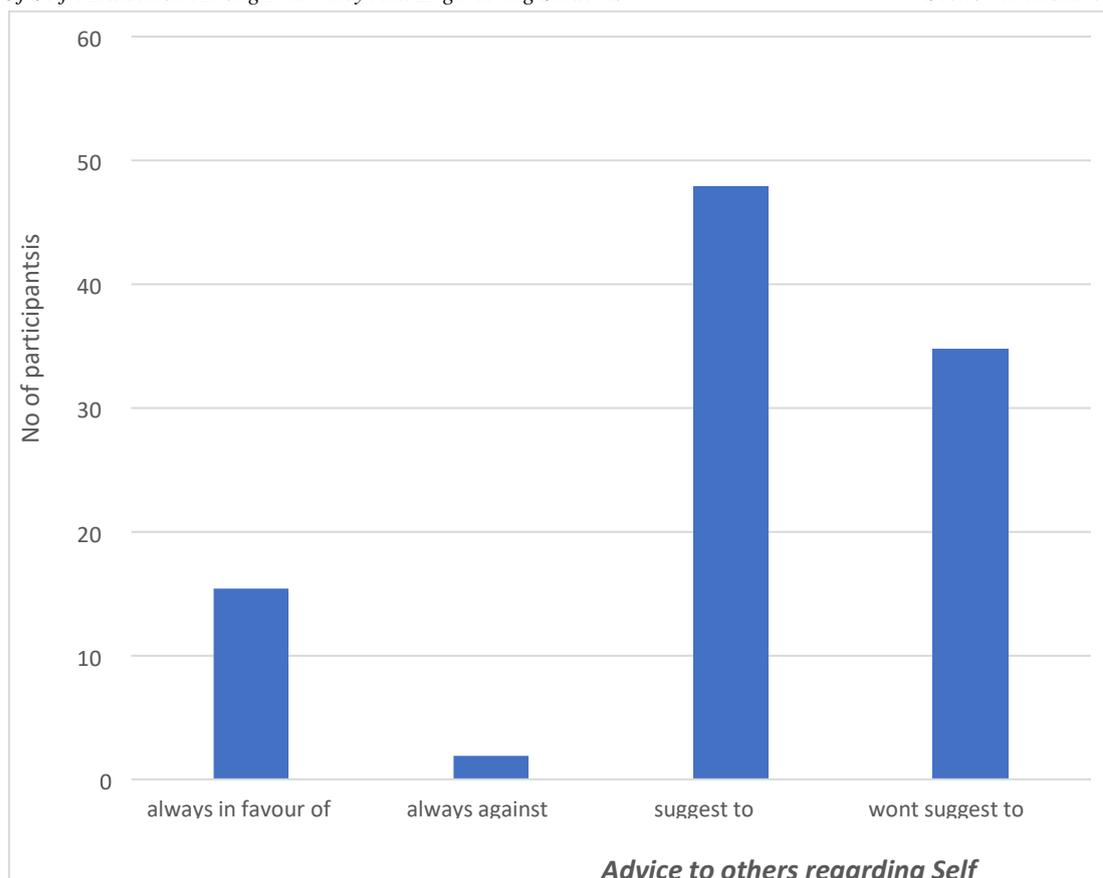
Attitudes towards self-medication practice(N=1000)	Sample(N)	Percentage (%)
Reasons in favour of self-medication practice		
➤ Mild problems	380	38%
➤ Previous experience	160	16%
➤ SM practice as taking active role in managingmy health	158	15.8%
➤ I am not sure	302	30.2%
Reasons against self-medication practice		
➤ Lack of trust on prescribers	102	10.2%
➤ Fear of taking medication	160	16%
➤ Risk of side effects	188	18.8%
➤ Lack of medical knowledge	187	18.7%
➤ I am not sure	363	36.3%
Advise to others regarding self-medication		
➤ I am always in favour of self-medicationpractice	154	15.4%
➤ I am always against self-medication practice	19	1.9%
➤ Did you suggest any medication to otherYes	479	47.9%
No	348	34.8%



GRAPH.2.7 shows reasons in favour of S.M practice



GRAPH 2.8 shows reasons against self-medication practice



GRAPH 2.9 shows Advices to others regarding S.M practice

DISCUSSION

All subjects with varying frequency are under self-medication practices. Among them 18.7% subjects of frequently using self-medication 25.9% subjects are moderately under the practices of self-medication, 55.4% subjects are rare practice of self-medication. General source of information in self-medication will be obtained from doctors, pharmacist, para medical staff, neighbours, friends, family, social network, previous experience, health professional knowledge of self-medication information about OTC drugs obtained from books and from various other sources under the area of the survey 52.2% of subjects obtained source of information from pharmacists 23.2% subjects' access from physician as shown in figure 3.1.21.2% subjects glean the advance from friends. Familiar nature of medication practice in India are OTC prescription Indian traditional ayurveda and home remedies. 58.5% subjects held down in survey are using self-medication of OTC drugs, 41.5% subjects have been followed by prescription. 75% of subjects obtaining medicines from pharmacy stores, 20% of subjects attain medicine from health care professionals or workers belong to government sector, 20% subjects gain medication through online source. Area of investigation is under the self-medication practice for the mild pathological

conditions like headache, fever, cold, nausea and vomiting, body pains, cough, diarrhea, abdominal cramps, and mild eye and ear infection and topical and skin infections. 39.5% of subjects using medication to get rid of headache, 29.7% of subjects using medication to get rid of common fever, 29.6% for common cold, 12% for nausea and vomiting. 315 subjects are under the practice of antibiotics for mild infections, in that 53% using amoxicillin, 46% of subjects using azithromycin. all subjects are using paracetamol in the form of Dolo-650 has been used in most frequent manner that is 87.8%. Among of 588 subjects of common cold medication CPM acquires 41% and inhalers 58%. 209 subjects are using cough syrups among them kuff-Q possess 39.2%, Benadryl acquires 23.4% take holds 37.3% 823 subjects are using paracetamol in the form of Dolo-650 among them 75.6% to get relieve from headache, 24.3% for body pains. 376 subjects are using Diclofenac 20%, Aceclofenac 17%, aspirin 8%, paracetamol for malaise myalgia and body pains. With the respective percentage 20.7%, 17.8%, 8.2% and 53.1% this shows all the subjects. 623 subjects are using body pains muscle pain among them diclofenac possess 20.7% Aceclofenac acquires 17.8% paracetamol taken by 37.6%. Body pains 376 of subjects used pain killers like diclofenac 20%, Aceclofenac 17%, aspirin 8%, paracetamol

53%, these are all pain killers but most of the people prescribed only paracetamol, diclofenac for reducing mild body pains. 61 of subjects taking vomiting tablets for reducing for vomiting sensation mainly using drugs are for vomiting is ondansetron 47% domperidone 52% when compared to ondansetron mostly taken domperidone to treat the vomiting. 71 Subjects are used in diarrhea medications for stopping of motions commonly using drugs for diarrhea for metronidazole 66%, loperamide 39% according our survey metronidazole mostly preferable drug for diarrhoea. According to our survey we identified 438 subjects using eye drops for eye related problem. The topical use of subjects is different types like ointments 26%, creams 19%, gel 7%, sprays 16%, powders 17%, patches 13%. After our survey we find out most of the subjects using ointments when compared to other topical medication. Commonly taking drugs for reducing abdominal pain (stomach pain) Meftal traffic-mf, Meftalis mostly used drugs when compared to other for relief of abdominal pain. By using self-medication 188 subjects observe side effects remaining 757 subjects are not identified any side effects due to self-medication.

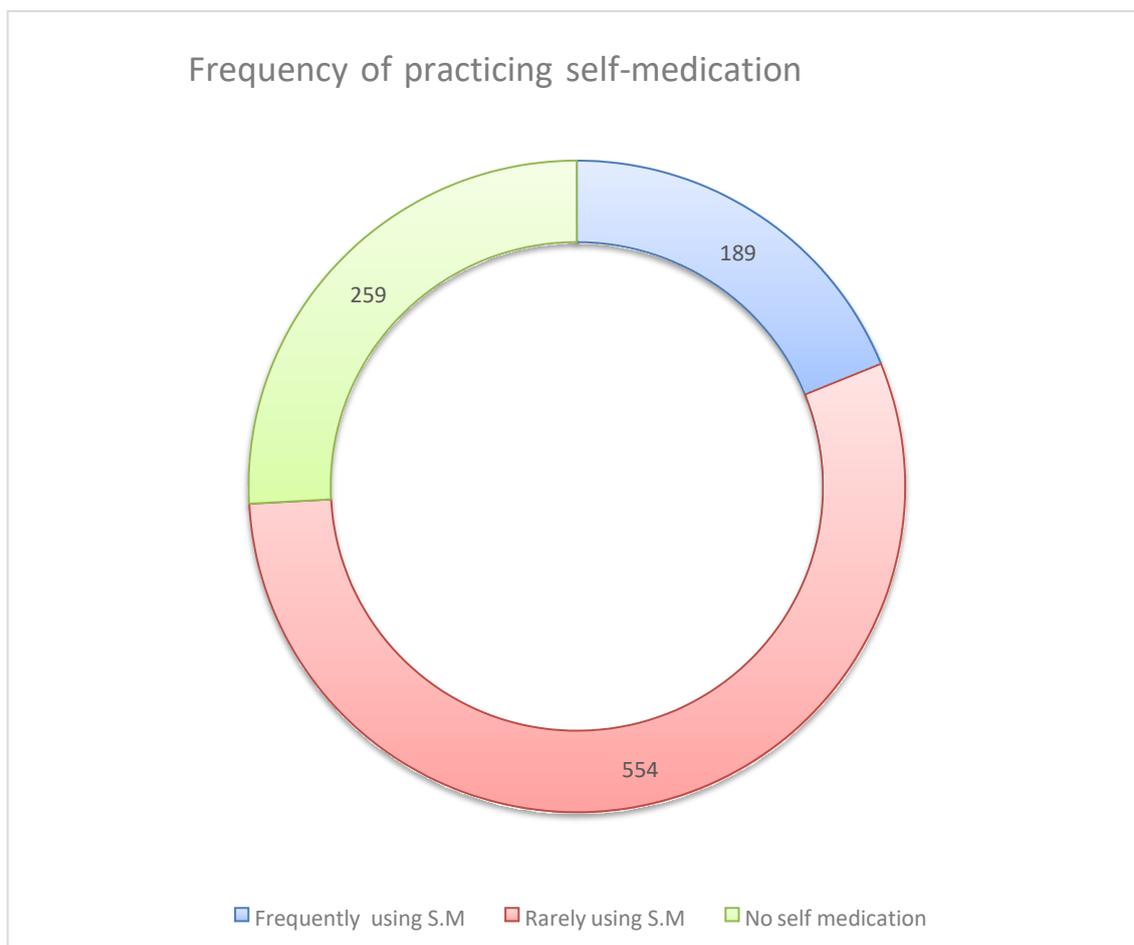
STUDENTS ATTITUDE TOWARDS SELF-MEDICATION PRACTICE

876 Subjects having reasons to either favor or against self-medication practice when some reasons favor of self-medication practice most of the subjects favor to the self-medication practice. These are the reasons reduce mild problems 40%, previous experience 16%, self-medication practice as taking active role in managing my health 9%, I am not sure 33%. According subjects trust self-medication practice is very useful to treat mild problems, previous experience for ex; one subject use paracetamol for fever, next time his knows so self-medication practice favor due to previous experience another reasons of self-medication practice is taking active role in managing health for ex; Bp tablets cancer, insulin, cold, tabletsetc..., manage our health for treat some problems managing health these are the reasons in favor if self-medication practice, reasons against self-medication some subjects don't like using self-medication practice because lack of trust on prescriber 11%, fear of taking medication 15%, risk of side effects 18%, lack of medical knowledge 17%, reason whatever it may be some subjects against self-medication practice. Some subject's suggesting medication to others because of now-a-days everyone educated people having small knowledge on OTC drugs like Meftal, cetirizine, paracetamol, inhalers, painkillers etc.,

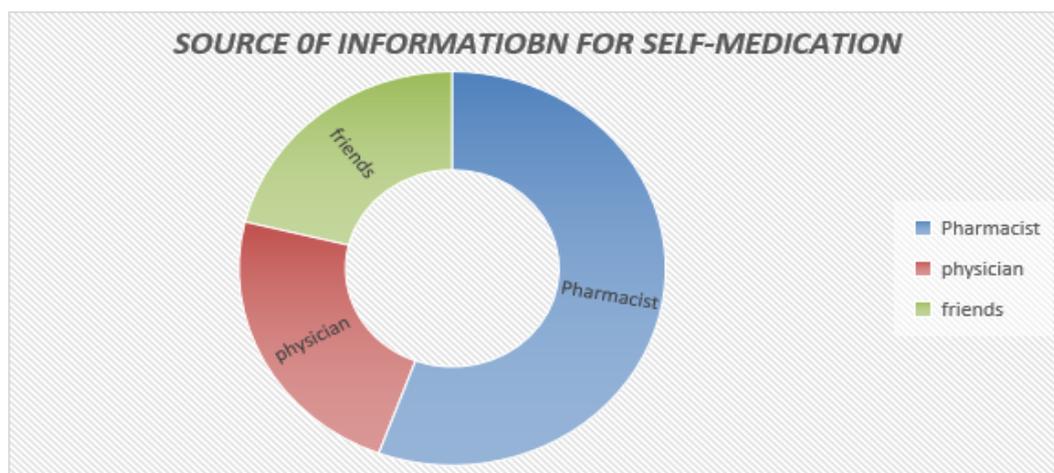
Self-medication information(N=1000)	Sample	Percentage
Did you practice self-medication		
Yes	620	62.0%
No	380	38.0%
Frequency of practice		
No self-medication	259	25.9%
Rarely	554	55.4%
frequently	189	18.9%
Source of information		
Pharmacist	556	55.6%
Physician	232	23.2%
Friends	212	21.2%
Medication types		
Creams	158	15.8%
Gels	61	6.1%
Sprays	204	20.4%
Powers	147	14.7%
Patches	108	10.8%
Abdominal pain		
Meftal	563	56.3%
Tropic mf	437	43.7%
Any side effects		
Yes	154	15.4%
No	846	84.6%

Nature of the medication used		
Non-prescription [OTC]	585	58.5%
Prescription [POM]	415	41.5%
Place of medications for self-use		
Pharmacy stores	750	75.0%
Home remedy	200	20.0%
online	50	5%
Symptoms		
Headache	395	39.5%
Fever	295	29.5%
Cold	296	29.6%
Nausea	6	0.6%
Types of medication used of self-medication		
Antibiotics [Amoxyllin]	45	4.5%
Antipyretic [Paracetamol]	750	75.0%
Cold [Kuff-Q, Benadryl]	60	6.0%
Body pains [Diclofenac, Aspirin]	62	6.2%
Headache [Diclofenac, Aspirin]	50	5.0%
Vomiting [Ondanserton, Domperidone]	16	1.6%
Diarrhoea [Metranidazole]	17	1.7%

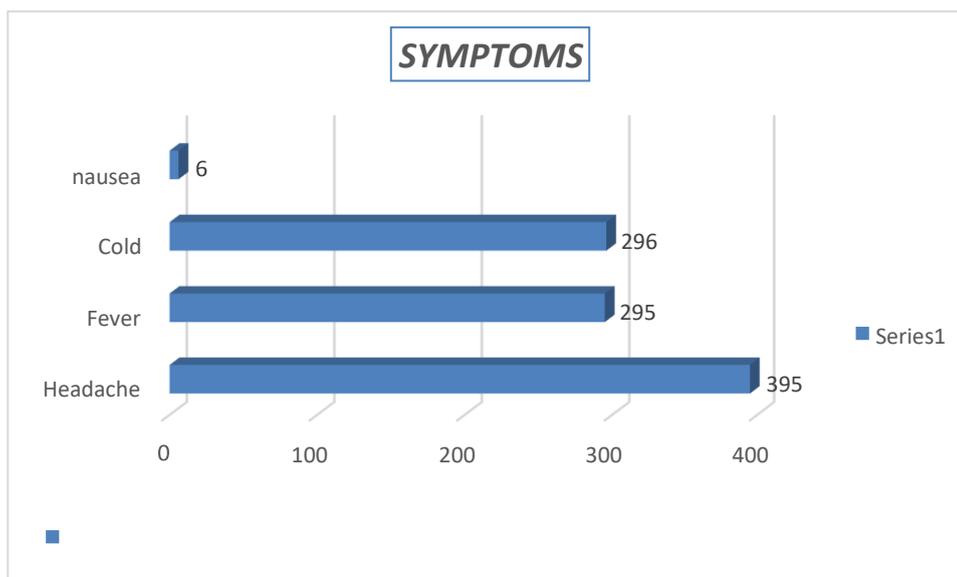
Ear & Eye drops	774	77.4%
YesNo	226	22.6%
Topical use	322	32.2%
Ointments		



GRAPH 3.0 Shows frequency of practicing self-medication



GRAPH 3.1 shows the source the of information for self-medication



Graph 3.2 Shows The Symptoms For Using Self-Medication

CONCLUSION

The majority of students are practiced the self-medication. The rational use of self-medication was reported in pharmacy students. Students are mostly medicated with OTC drugs such as paracetamol in the form of Dolo-650 are mostly used. For respiratory problems the students are used chloro phenyl amine maleate (CPM) along with antibiotics such as amoxyllin, kuff- Q, Benadryl. And also, mostly self-medicated with eye & ear drops respectively. Engineering students have lack of knowledge regarding risk associated with their self-medication. Almost students are used self-medication to reduce mild problems. The survey reveals that both pharmacy and engineering students are good awareness towards self-medication. The rational use and frequently of self-medication was more in pharmacy students when compared to engineering students. The current survey helped students to discuss among themselves and to look back the way of self-medication in their personal life and correct the perception towards self-medication.

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