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THE KNOWLEDGE, ATTITUDE AND PRACTICE OF SELF-MEDICATION AMONG PHARMACY STUDENTS

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ABSTRACT

Background: Self-medication is the use of drugs with therapeutic value but without professional advice or prescription. It has also been defined as the use of nonprescription medicines. **Aim:** This study was undertaken to determine the knowledge, attitude and practice of self-medication among pharmacy students. **Methods:** Prospective, observational study conducted at Academy of Pharmaceutical Sciences, Pariyaram, Kannur (DIST) duration was 4 months. Questionnaire includes two parts; the first part contained questions on demographic information and the second part contained questions on core issues such as health seeking behavior, names, sources and factors of drugs used for self medication. Prior to the survey students were explained about the purpose of the study and Written informed consent were obtained. **Results:** Majority of the respondent use analgesic as the main class of drug for self medication, fever and headache were the major complaints. 67.2% respondent took self medication sometimes were more prone to ADR (8.3%). Main source of self medication were pharmacy shop 99.7% and friend /family 99.49%. 68.42 % of the respondents had a positive attitude towards self-medication and favored self-medication states that it was acceptable. 87.7% respondent were aware about OTC and generic drugs and 53.9% aware about the side effect of drug administrated. **Conclusion:** The prevalence of self medication practices is alarmingly high among pharmacy students and majority of have a positive attitude towards self medication. In this situation proper statutory drug control and interventions to improve knowledge of self medication is needed.

KEYWORDS: Self medication, Prescription, Prospective, Observational.

INTRODUCTION

It is common for human to feel unwell, and they have an inherent tendency to use herbs, potions, medications, etc. for treating themselves. Now a day's people throughout the world act on their own for their health; they practice self-care.[1] Self-medication is the use of drugs with therapeutic value but without professional advice or prescription. It has also been defined as the use of nonprescription medicines.[2] In several studies it has been found that inappropriate self-medication results in wastage of resources, increases resistance of antibiotics, wastage of money and generally serious health hazards such as adverse drug reactions, prolonged suffering and drug dependence.[3] Drugs that are prone to self-medication include analgesics, antibiotics and cough syrups, among others. The most common indications for self-medication were to relieve the symptoms of headache, cough, cold, throat, stomachache and fever.[4] Studies suggests that medication knowledge of medical students might contribute to increase self-medication.[1,5,6] Users should aware about the drugs used are those indicated for conditions that are self recognizable; how to take or use the drugs; the effects and possible side-effects of the drug well as ways of monitoring these side effects; possible interaction with other drug; duration of the drugs etc.[7]

AIM AND OBJECTIVE

This study was undertaken to determine the knowledge, attitude and practice of self-medication among pharmacy students of the Academy of Pharmaceutical Sciences, Pariyaram, Kannur (DIST).

1. To measure college students' knowledge of drug safety.
2. To evaluate students' attitudes toward medication consultation.
3. To evaluates the factors affecting self medication.
4. To assess self-care behaviors with regard to nonprescription medicines, medication consultation with pharmacists, and appropriate use of medicines among college students.

METHODOLOGY

The study was conducted at Academy of Pharmaceutical Sciences, Pariyaram, Kannur (DIST) and is a government under taken pharmacy institute having B Pharm, M Pharm and Pharm D courses. The study was performed based on the evaluation of Knowledge, Attitude and Practice of Self-Medication among pharmacy students using validated questionnaire. The

study duration was 4 months from January to April 2018, 2 month for questionnaire validation and lasting 2 month for collection of data**.** The study includes all pharmacy students who were willing to participate in the study were enrolled.

Study Design: It was a prospective, observational study for identifying Knowledge, Attitude and Practice of Self-Medication among pharmacy students in Pharmacy College. Questionnaire was in two parts. The first part contained questions on demographic information of the respondents such as age, gender, class level in the university, etc. The second part contained questions on core issues which dwelt on socio-economic variables such as health seeking behavior, names and sources of drugs used for self medication, type of ailment treated through self-medication, factors influencing self medication practices and strategies that may help reduce self-medication practices among the respondents. Students were given a questionnaire during a regular class period. Prior to the survey all the students were explained about the operational terms such as self medication, antibiotics etc, type and purpose of the study in brief and informed that participation is voluntary and their collected information will not be shared and it would be anonymous. Written informed consent was obtained from each volunteer prior to the study.

Statistics: The data were managed and analyzed through IBM SPSS 21version. Descriptive analyses were done by the calculation of percentages and frequencies.

RESULTS AND DISCUSSION

DEMOGRAPHIC

On the day when the questionnaire was administered, 425 students out of 399 were present (Table no: 1). All the students (n = 399) responded to the questionnaire, of whom 50 were males and 349 were females. Their mean age in years was 20.97 (± 1.482: range from 17 to 25 years). The majority, 87.4% were female respondent so study can't perform statistical variation in gender. But other studies states that females students were more interested in taking Self-medication compared to male students; may be due to the fact that the female students are more hesitant to go to the hospital or outpatient department for minor illness and the menstrual problems faced by them (Thadani. *et al*(2013),[8] Mehul Agrawal. et al[9]).

Table No: 1 Total number of respondents from each batch.

Batch	Total respodent	Male	Female
First Year Pharm D	28	4	24
Second Year Pharm D	27	5	22
Third Year Pharm D	26	5	21
Fourth Year Pharm D	28	6	22
Fifth Year Pharm D	26	4	26
Sixth Year Pharm D	13	5	8
First Year B Pharm	55	5	50
Second Year B Pharm	55	4	51
Third Year B Pharm	56	4	52
Fourth Year B Pharm	58	6	52
First Year M Pharm	13	0	13
Second Year M Pharm	12	2	12

Table No. 2: Socio demographic factors of respondent.

Socio-Demographic Factors		No: of Students (N=399)	Percentage (%)
Gender	Male	50	12.53
	Female	349	87.4
University class	Distinction	51	12.8
	First class	128	32.1
	Second class	93	23.3
	Failed	44	11
	N A	83	20.8
Accommodation	Hostler	182	45.6
	Day Scholar	217	54.4

Practice

In the study the prevalence of self medication among pharmacy students was 99.74% which included 349 of females and 49 of males. The different studies confirm in India regarding the prevalence of self medication were 57.05% in West Bengal,[10] Karnataka 88.18%,[5] and 78.6% in Mangalore.[11] But the studies conducted in other developing countries shows, the prevalence of self medication was low 25.4% in Ethiopia,[12] 55% in Egypt[8] and 55.3% in Karachi.[13]

The accommodation for study population shows that 182 (45.6%) were day scholars and 217 (54.4%) hostlers (Table no: 2). The spearman's correlation (p=0.000) between day scholar versus attitude towards self medication reveals that hostlers were given more positive attitude towards self medication while comparing with day scholar. Since in hostel they have to take care they so might be chosen self-medication as immediate solution. Unlike home they got drugs easily from inmates. In case of frequency of self medication 268 (67.2%) students took

self medication sometime, 131 (32.8%) rarely and no one always. In 399 respondent 33(8.3%) were hit with ADR and there is a strict correlation between ADR occurred versus frequency of self medication taken by using spearman's correlation method (p=0.000). According to study data it give the impression that students who took self medication sometimes were more prone to ADR while comparing with rarely taking student.

Majority (398 (99.7 %)), of the respondents indicated that they used analgesic drugs for self-medication which is shore up by the study done by Vedrana AV(2001)[14], Hughes CM(2001)[15] and Henry James (2006)[1]; while 43 (10.8%) declared to taken H_2blockers as self-medication in present study (Figure No: 1). The prominent disease conditions that predisposed respondents to self-medication practices with analgesic were revealed by the respondents as fever 338 (99.7%) and headache 103 (25.8%) it may be due to hectic academic schedule; others due to menstrual problems 119(29.8%) and body pain 85 (21.3%). Other complaints like cough102 (25.5%), diarrhea151 (37.8%), acidity 151 (37.8%) and so many different reasons for self medication (Table No-3).

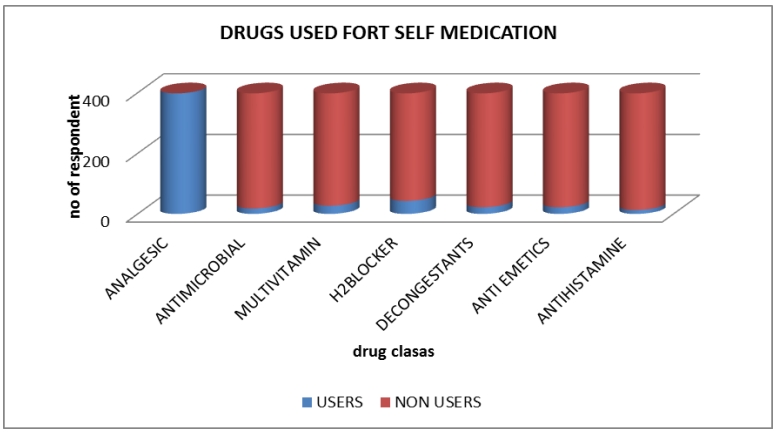

Fig. 1: Drug class used for self medication.

Table No. 3: Complaints for self medication.

Complaints	No of respondent
Fever	339
Cough	102
Runningnose	14
Head ache	103
Body pain	85
Vomiting	10
Diarrhoea	151
Acidity	151
Skindisease	17
Hairfall	66
Menstrual problem	119

Student respondent to the different sources of self medication like pharmacy shop, primary health care center, medical representatives and friends/family were they get drugs. According to the availability or wish 398 (99.7%) were chosen pharmacy shop. 397(99.49%) who choose friend /family respondent carries the risk of exposure to expired medicine, medicine meant for someone else or drugs that may have been originally prescribed for a different problem. Respondents also got drugs from primary health center 18(4.5%) and medical representative 16(4%). The issue of long waiting queues at clinics or hospitals was also raised by 99% of the respondents as one of the reasons for seeking self-care in order to meet up with their tight academic schedule. However, this could also mean that health services need to be improved so that treatment becomes more accessible and the patient's waiting time is minimized. None of the students taking a non prescription drug along with other prescribed medicines and the entire respondent are fear to have self medication for chronic disease.

Table No. 6: Selection of self Medication based on.

Selection	No of respondent	Percentage (%)
Previous doctor prescription	83	20.8
Own experience	116	29.1
Recommendation by community pharmacist	165	41.4
Class room teaching	189	47.4
Opinion from family members	73	18.3
Internet	181	45.4

189 (47.4%) of students took self medication according to the knowledge from class room teaching and also from senior students because they have more clinical topics in pharmacotherapeutics, pharmacology and pharmacy practice in final years. 73(18.3%) took the opinion from family members while taking self medication, especially first year students (Table No-6). 83(20.8%) students took self medication with a previous doctor prescription and 116 (29.1%) according to their own experience. This has implications, because many diseases have similar symptoms and a person using previous experience may be exposed to the dangers of misdiagnosis and consequently wrong treatment.

Attitude

The majority (68.42% (373)) of the respondents had a positive attitude towards self-medication and favored self-medication saying that it was acceptable, while 31.3% (125) felt it was unacceptable; same results were published by Henry James (2006).[1] In statistical correlation between years of study versus attitude towards self medication shows p value as 0.000. Senior student have more positive attitude towards self-medication while comparing

with juniors as they were exposed to knowledge about diseases and drugs. Similar observation was made by Shivaraj.B.Patil et al.[5] In Pharm D student shows more positive attitude while comparing with B. Pharm as they are exposed to clinic practice in hospital.

Knowledge

A total of 366 participants read the package insert and search internet for drug information's. From these 176 (44.1%) fully understood the content, 126 (31.6%) partially understood and 64 (16%) not at all. Mostly senior Pharm D students (5th year and sixth year) had a fair knowledge about the drug information while comparing with B Pharm students and Junior Pharm D students, due to their clinical practice in hospital like patient counseling, ward rounds, drug information services and ADR reporting. Most of the respondent 350 (87.7%) were aware about OTC and generic drugs and 215 (53.9%) aware about the side effect of drug administrated and 183 (45.9%) not aware.181 (45.36%) are aware about the problems of self medication like antibiotic resistance, drug dependence, organ damage, drug interaction, ADR and incorrect self diagnosis but they still indulged in this activity. Studies conducted in Southern Spain[16] and on students in Croatia[17] where 41% and 38% people respectively took antibiotics without consulting a doctor. In our study only 4.5%, of students had taken antibiotics without proper clinical evaluation, 181 (45.36%) students were aware about antibiotic resistance.

Table No. 4: Awareness about various aspects of self Medication.

Knowledge	Aware (%)	Not Aware (%)
Aware about the Problem of Self Medication	181 (45.36%)	218 (54.6%)
Aware about Drug Information Leaflet	176(44.1%): Fully Understood	64(16%)
	126(31.6%): Partially Understood	
Aware about Side Effect of Drug Taken	215 (53.9%)	183 (45.9%)
Aware about OTC and Generic	350 (87.7%)	49(32.8%)

Table No. 5: Five points considered while choosing drug.

Points Considered	Number of Respondent	Percentage (%)
Indication	398	99.7
Side effect	139	34.8
Drug interaction	30	7.5
Frequency and duration	85	21.3
Route of administration	42	10.5
Brand	10	2.5
cost	16	4

First year students of both Pharm D and B Pharm are rarely taking drugs and they have a negative attitude towards self medication. The knowledge of pharmacology and applied therapeutics subjects taught in second year probably has led to a false sense of confidence in self-diagnosis and self-management leading them to self-prescribe irrationally. Perwez Khanam and Dana Haj-Ali[18] also conclude the same result in nursing students of King Saud Bin Abdulaziz University for Health Sciences, Al Ahsa. There is a need for a review of educational programs especially the teaching of clinical pharmacology to include topics on self- medication and judicious use of medicines398 (99.7%) students consider the indication while taking self medication but only 139 (34.8%) consider side effects and 30 (7.5%) drug interaction respectively (Table no-5).

CONCLUSION

Majority of the respondent use analgesic as the main class of drug for self medication, fever and headache were the major complaints. 67.2% respondent took self medication sometimes are more prone to ADR (8.3%). Main source of self medication were pharmacy shop 99.7%, and friend /family 99.49%. 68.42% of the respondents had a positive attitude towards self-medication and favored self-medication saying that it was acceptable. Most of the respondent 87.7% were aware about OTC and generic drugs and 53.9% aware about the side effect of drug administrated.

The prevalence of self medication practices is alarmingly high among pharmacy students and majority of have a positive attitude towards self medication. In this situation, firstly made interventions to improve drug knowledge and safe medication practices, such as providing medication information, behavioral simulation, or even cognitive intervention, should be made immediately by pharmacists to improve the safety of medication use. Secondly, the entire respondent consults pharmacy as drug source. This issue needs to be addressed by the responsible authorities in India; a proper statutory drug control must be implemented, rationally restricting the availability of drugs to the public. Medical students are more taking self medication due to their little knowledge, so there is a need for a review of educational programs especially the teaching of clinical pharmacology to include topics on self-medication and judicious use of medicines. These measures would definitely reduce the incidence of drug-related mishaps and help in maintaining good health of the individual and society.

LIMITATION OF STUDY

- The study could have been more generalized if it was multicentre involving other pharmacy colleges also.
- The limitation of this survey based study is its small sample size. However, such study involving large sample size can be carried out.
- The main limitation of this study is that the data collected were self-reported which may introduce some bias in the behavioral pattern of the respondents.

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