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A Prospective Study to Assess the Prevalence and Pattern of Self-Medication Among Various Classes of Community



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ABSTRACT

Self-medication can be defined as the self-consuming of medication without getting advice from a physician for either diagnosis or treatment. Self-medication is now a common practice worldwide because it is considered the first choice in the majority of illnesses. Serious health hazards like drug resistance, drug side effects, wastage of resources, and death are the major problems associated with SMP. Drug related problems include under-treated indications and those happening during drug selection such as drug duplication, inappropriate dosage form, drug interaction, contraindications, and wrong drugs. The main purpose of this study is to assess the prevalence and pattern of self-medication among the various class of the community like employed, non-employed, and students. . The study was a community-based cross-sectional study conducted among 550 people in Eraviperoor Grama panchayath for 6 months. The salient findings of our study concluded that self-medication practices were found higher in student's groups than employed and unemployed groups. Antipyretics, analgesics, GI medications (Antacids, Antiemetics, Antidiarrheals), antihistamines and cough syrups were the major categories of medications preferred for SMP.



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INTRODUCTION

Self-medication practice (SMP) is the use of medication without the professional supervision of health care professionals. Most of the self-medication practices are seen with NSAIDs, antimicrobials, corticosteroids, drugs for respiratory tract infections, lifestyle diseases (such as hypertension, diabetes mellitus, thyroid disorders), and GI disorders. ^[1]

Self-medication

According to WHO, self-medication is the use of drugs without prior medical consultation regarding indication, dosage, and duration of treatment. It involves the use of medicinal products by the consumer to treat self-recognized disorders, symptoms, recurrent disease, or minor health problems. It is independent of age for both males and females. ^[1]

Self-medication is regarded as a major element of self-care. The World Health Organization defines self-care as “the ability of individuals, families, and communities to promote health, prevent disease, and maintain health and to cope with illness and disability with or without the support of a health-care provider”. ^[1]

Self-medication which is also called OTC drugs is so-called because they are available without a doctor’s prescription through pharmacies mostly in less developed countries. ^[2] The recent developments which happened in the pharmaceutical industry sector have also contributed greatly to this widespread availability of OTC medicines. The most common drugs preferred for self-medication are antipyretics, analgesics, antiseptics, antibiotics, cough, and cold medications. ^[3,4,5] Although these medications are considered risk-free and useful for the treatment of common health problems, their excessive use can also lead to serious side effects and unfavorable reactions. There is also the potential for misuse and abuse of such products. There are also increasing reports about the misuse and abuse of such products. ^[6,7,8,9]

Self-medication is not at all regarded as the consumption of modern medicines but also includes inappropriate use of herbs and home remedies. In developed countries, the self-medication practice is restricted to OTC products only but in developing countries, it has been found that this practice occurs for both OTC as well as prescription-only products. ^[7,10,11]

Sources of Self-medication

Previous prescriptions, friends, advertisements, chemist shops, and books serve as the various sources of Self-medication. SMP is influenced by many factors such as education, family, society, law, availability of drugs, and exposure to advertisements. [7,12]

Conditions treated by Self-medication

Pain killers, cough and cold remedies, anti-allergy medicines, vitamins, and energy tonics are the most commonly available OTC medications.^[13] Although these medications are useful for the treatment of common health problems such as cold, pain, headache, gastrointestinal problems, allergy, fever, skin problems and are considered risk-free, they contribute to some side effects. [14]

Problems associated with Self-medication

In several studies, it has been found that SM is associated with many drug-related problems such as wastage of resources, increased resistance of pathogens in case of antibiotics, serious health hazards such as adverse drug reactions, drug interactions, incorrect self-diagnosis or delayed diagnosis, incorrect manner of administration, incorrect dosage, incorrect choice of therapy, masking of severe disease, and/or risk of dependence and abuse, thus complicating the problem.^[15,16] Even if the drugs were used correctly, self-use may result in many serious health hazards. Adherence to treatment and quality of life is also affected by self-medication. [17]

A major threat produced by SMP is the inappropriate use of antibiotics. Their inappropriate use leads to the emergence of drug resistance worldwide particularly in developing countries, where antibiotics are often available without a prescription.^[18,19]

People with higher education and economic level seem to tend self-medication and irrational drug use, thus health education and health literacy should be emphasized and included in the curriculum at every education level, apart from formal education.^[18,20] The irrational use of drugs also increases the risk of adverse events, multi-drug-resistant bacterial infection, hypersensitivity, drug withdrawal symptoms and of masking disease which can delay correct diagnosis. [21]

The practice of self-medication among students

Implementing strict rule against pharmaceutical companies and increasing awareness of adverse effects and drug resistance are the only ways to prevent this. On analyzing the students' attitude towards self-medication, a significant number of students agreed that SM is part of self-care. Hence, it is important to make college students aware of the consequences of improper use of medicines. [22]

MATERIALS AND METHODS

The study was designed to assess the prevalence and pattern of self-medication among the various class of community like employed, non-employed, students and various categories of drugs used for self-medication practice carried out in 550 participants by using a predesigned data collection form that contains various questions to meet the objective.

Study Design: Prospective study.

Study Setting: Eraviperoor grama panchayath

Study period: 6 months (November 2019-April 2020)

Study population: The study population consisted of 550 people which included illiterates, undergraduates, postgraduates and graduates of young, adult and elderly age group.

Inclusion and exclusion criteria

Inclusion criteria:

- Individuals treating self-recognized illness and symptoms
- Patients with Diabetes mellitus, Thyroid disorders, and Hypertension
- Patients with the age group of above 15 years consented to participate by filling a questionnaire
- Residents of Eraviperoor Gramapanchayath

Exclusion criteria:

- Patients with an age group below 15 years.
- Patients with hepatic disease and patients underwent major surgeries.

- Pregnant women and lactating mothers
- The residents who are absent on the day of the survey
- Differently-abled people

Sample Size: sample size of 550 patients/population.

Study Variables:

Socio-demographic variables- Age, gender, education, work status and drugs used for Self-medication.

Data Collection Technique:

Participants were asked to fill a prepared questionnaire to determine their drug use behavior. Those with communication problems and those who refused to participate were excluded. Questionnaires were filled through face-to-face interviews with participants. The questionnaire prepared in English was translated into the local language.

Data Collection Tools:

Data collection proforma



RESULTS AND DISCUSSION

RESULTS

Table No. 1: Distribution of participants based on Age Group

Sr. No.	Age	Frequency	Percentage (%)
1	15-35	365	66.36
2	36-55	79	14.36
3	56-75	106	19.27
	TOTAL	550	100

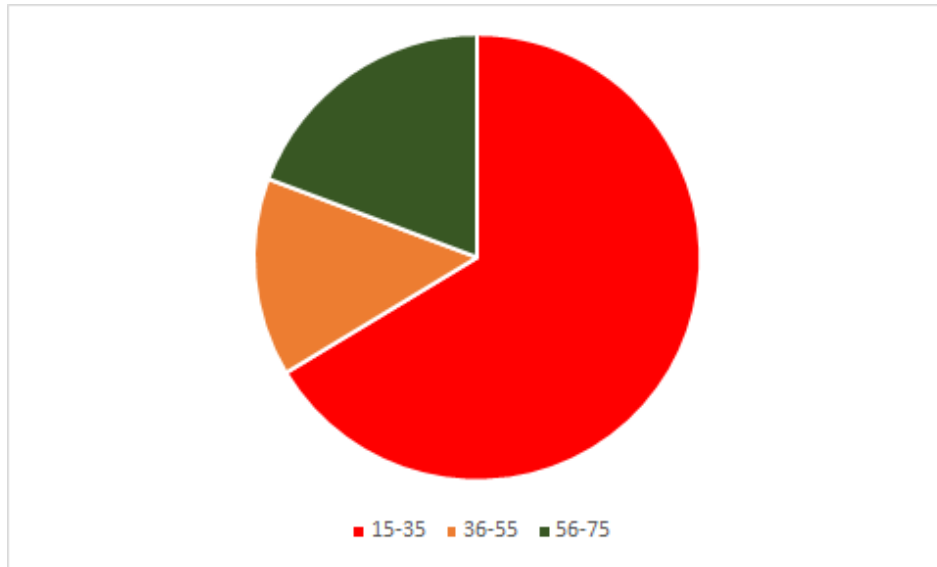


Figure No. 1: Distribution of participants based on Age Group

In this study, the highest percentage of participants were found to be in the age group of 15-35(66.36%) followed by the age groups 56-75(19.27%) and 36-55(14.36%).

Table No. 2: Distribution of Participants Based on Gender

SL.NO	GENDER	FREQUENCY	PERCENTAGE(%)
1	MALE	128	23.27
2	FEMALE	422	76.72
	TOTAL	550	100

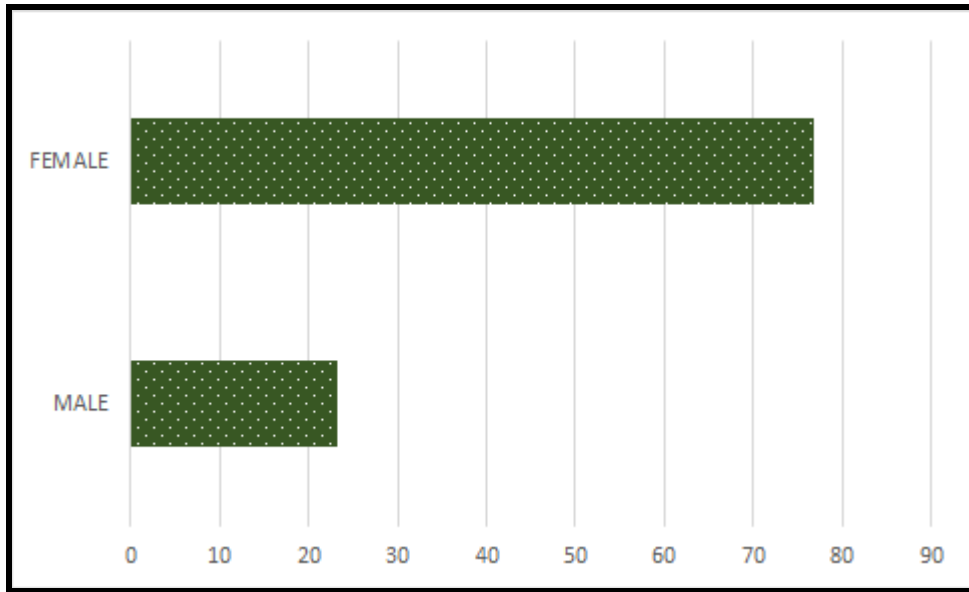


Figure No. 2: Distribution of Participants Based on Gender

In this study, 76.72% of the study population was constituted by females whereas 23.27% was constituted by males.

Table No. 3: Distribution of Participants Based on Education Status

SL .NO	EDUCATION	FREQUENCY	PERCENTAGE (%)
1	ILLITERATE	4	0.7
2	UNDER GRADUATES	335	60.90
3	GRADUATES	124	22.54
4	POST GRADUATES	85	15.45
5	PROFESSIONAL	2	0.36
	TOTAL	550	100

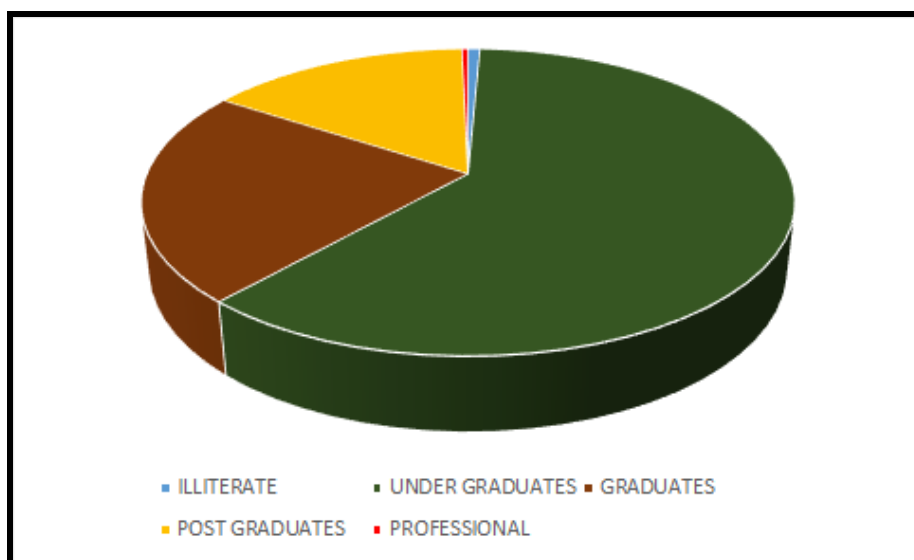


Figure No.3: Distribution of participants based on Education Status

In this study, 60.90% of participants were Under Graduates, 22.54% were Graduates, 15.45% were Post Graduates, 0.36% were Professionals, and followed by 0.7% were illiterates.

Table No.4: Distribution of Participants Based on Work Status

Sr. No.	Work Status	Frequency	Percentage
1	STUDENT	325	59
2	UNEMPLOYED	94	17
3	EMPLOYED	131	23.81
	TOTAL	550	100

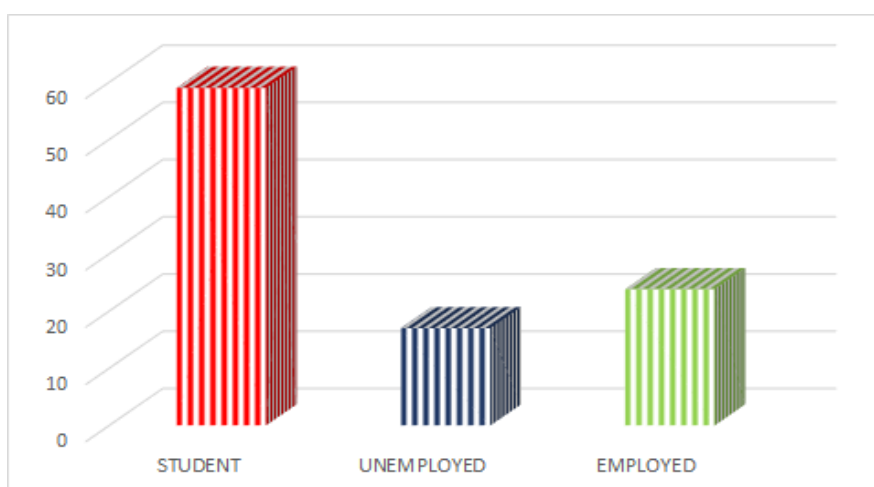


Figure No.4: Distribution of Participants Based on Work Status

In this study, 59% of participants were students, 23.81% were Employed and followed by 17% were Unemployed.

Table No.5: Categories of medicine preferred for SMP

Sr. No.	Types Of Drugs Used	Frequency	Percentage
1	No Self-Medication	29	5.71
2	Antipyretics	200	39.44
3	Antihistamines	38	7.49
4	Analgesics	140	27.61
5	Cough Syrups	47	9.27
6	Antiemetics	1	0.19
7	Antacids	33	6.50
8	Ear/Eye Drops	5	0.98
9	Nasal Drops	1	0.19
10	Skin Preparations	3	0.59
11	Vitamins	5	0.98
12	Antidiarrheals	5	0.98
	Total	507	100

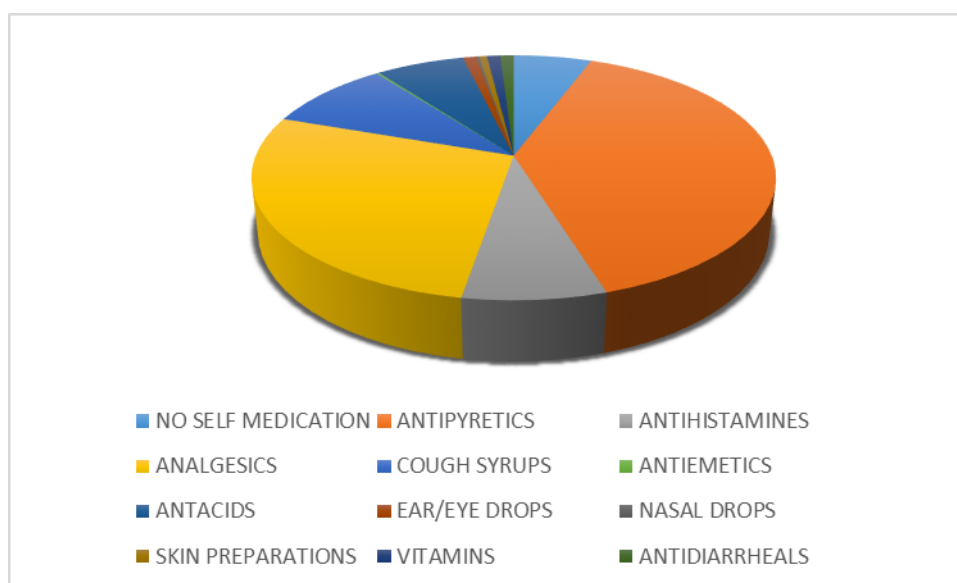


Figure No.5: Categories of medicine preferred for SMP

Out of 550 subjects following were the lists of major drugs consumed. Antipyretics (39.44), Analgesics (27.61), GI medications (Antacids -6.50%, Antidiarrheals-0.98%, Anti emetics-0.19%), antihistamines (7.49) and cough syrups (9.27) were the major categories of medications preferred for SMP.

DISCUSSION

The study population consisted of 550 people who consisted of illiterates, UG, PG, and graduates of young, adult, and elderly age groups from provinces of Eraviperoor Gramapanchayath.

Regarding the age distribution, in our study, we found that SMP is more among younger people. This was supported by a cross-sectional study conducted by **Kumar et al** in March 2013 to study the prevalence and practice of SMP in an urban area by interviewing 236 persons using a pretested questionnaire which concluded that the prevalence of self-medication is more among younger people. ^[24] Reasons behind this may be their decreased knowledge about the adverse effects and lack of time. In our study, the highest prevalence of self-medication use was seen among undergraduates of young adults, middle-aged adults, and graduates of elderly people. No SMP was seen among graduates of middle-aged adults. This is supported by findings of a study conducted by **Serdar et al** on the practice of self-medication in an urban population in Edirne City Turkey which concluded that SMP is more in those with higher education and economic level and a study conducted by **Deena et al** in Karnataka on self-medication practice among medical, pharmacy and nursing students which concluded that the prevalence of self-medication practice is more among people with higher education (medical and pharmacy students) and economic level seem to tend self-medication and irrational drug use. ^[22,26] Another study conducted by **Soni et al** to assess the Pattern and Prevalence of Self-Medication among Second Year Medical Students at the All India Institute of Medical Sciences in Bihar also reveals that medical undergraduates are more prone to self-medication practice. ^[27] Reasons behind this were increased knowledge related to drugs and diseases as well as lack of time.

In our study, SMP was found to be more among literate than illiterate ones. This result was similar to a study conducted by **Sonam et al** in Bhopal to find the reason for self-medication and make the public aware of its effects which concluded that the prevalence of self-medication is high in the Impact of patient counseling on the safe use of self-medication

professional students when compared to illiterate people.^[2]This may be due to knowledge about the disease and drugs among the literate people.

Regarding the concept of self-medication practice, observations in our study were even though SMP is unsafe, people were benefited from its use. Undergraduates and graduates of young adults were benefited from its use, while PGs and professionals thought that SMP was unsafe and benefited. Middle-aged adults and elderly people agreed with the fact that SMP is unsafe irrespective of the educational status. This was supported by findings from a cross-sectional study conducted by **Coelho et al** which concluded that self-medication is a part of self-care.^[17]

Considering the categories of medicines that are preferred for SMP, in our study, antipyretics, analgesics, GI medications, antihistamines, and cough syrups were the major categories of medications preferred for SMP. Among the young adults, undergraduates, graduates, and professionals commonly used antipyretics while PGs used both antipyretics and analgesics. Among middle-aged adults, all educational groups mainly preferred antipyretics for SMP. The elderly people mainly preferred antipyretics and GI medications irrespective of educational status. This was supported by a prospective cross-sectional study conducted by **Ibrahim et al** which showed that analgesics, antipyretics, and antihistamines are highly used.^[25]

Another study carried out by **Keche Y et al** which analyzed the self-medication pattern in rural areas of Pune has shown that NSAIDs (33.33%) and GIT ailment drugs (13.61%) are the most commonly used drugs for Self-medication.^[23]

Among graduates and professionals, the simple disease was the major reason. Both simple disease and lack of time were the reasons for SMP among PGs. In our study among middle-aged adults simple diseases, previous experience with disease or Self-medication, lack of transportation, knowledge about drug and disease, need for quick relief, presence of health care professionals in the family were the common reasons for SMP. The simple disease was the main reason contributing to SMP among undergraduates and graduates.

Employment also is a factor concerning the practice of Self-medication. In our study students were found to use self-medication in comparison with other categories of age as well as consumption was found to be higher in employed groups than unemployed groups.

CONCLUSION

The study concludes that self-medication practices were found higher in students groups than employed and unemployed groups. Antipyretics (39.44%), Analgesics (27.61%), GI medications (Antacids-6.50%, Antidiarrheals-0.98%, Antiemetics-0.19%), Antihistamines (7.49%) and Cough syrups (9.27%) were the major categories of medications preferred for SMP.

LIMITATIONS

Possibility for alteration of information's by the patient.

AREAS OF CONFLICT: NIL

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