



A PROSPECTIVE STUDY ON CATEGORIES OF MEDICATIONS PREFERRED FOR SELF MEDICATION PRACTICE

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ABSTRACT

Self-medication practice is the use of medications to treat self-diagnosed disorders or symptoms, or the intermittent or continued use of a prescribed drug for chronic or recurrent disease or symptoms. The number of over-the-counter medications has been increased significantly, allowing more individuals to practice self-medication. The major problems associated with self medication practices are serious health hazards like drug resistance, drug side effects, wastage of resources, and death. Drug related problems include incorrect self-diagnosis, incorrect manner of administration, under treated indications, drug duplication, inappropriate dosage form, drug interactions, contraindications, wrong drugs, masking of a severe disease and risk of dependence. The main purpose of this study is to assess the various categories of drugs used for self medication. Our study was a community based prospective study conducted among 250 people in Eraviperoor Gramapanchayath for a period of 6 months. The salient finding of our study was that the major categories of medicines used for self medication practices were antipyretics, analgesics, gastrointestinal medications, antihistamines and cough syrups.

KEYWORDS: Self medication, drug resistance, contraindications, drug interactions, antipyretics.

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 disorder, 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 are also called OTC drugs are 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 wide spread 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 unfavourable reactions. There is also the potential for misuse and abuse of such products. There are also increasing reports about 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 prescription, friends, advertisements, chemist shop 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 a 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 a number of serious health hazards. Adherence to treatment and quality of life are also affected by self-medication.^[17]

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

Self-medication and over-the-counter drugs are significant problems resulting in irrational drug use.^[5] People with higher education and economic level seem to have a tendency in self-medication and irrational drug use, thus health education and health literacy should be emphasized and included in the curriculum in 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]

MATERIALS & METHODS

The study was designed to assess the various categories of drugs used for self medication practice, carried out in 250 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 250 people which included illiterates, under graduates, post graduates 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 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 undergone major surgeries.
- Pregnant women and lactating mothers
- The residents who are absent on the day of survey
- Differently abled people

Sample Size: sample size of 250 patients/population.

Study Variables

Socio-demographic variables- Age, gender, education, occupation, socio economic status, drugs used for self medication.

Data Collection Technique

Participants were asked to fill a prepared questionnaire to determine their drug use behaviour. 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

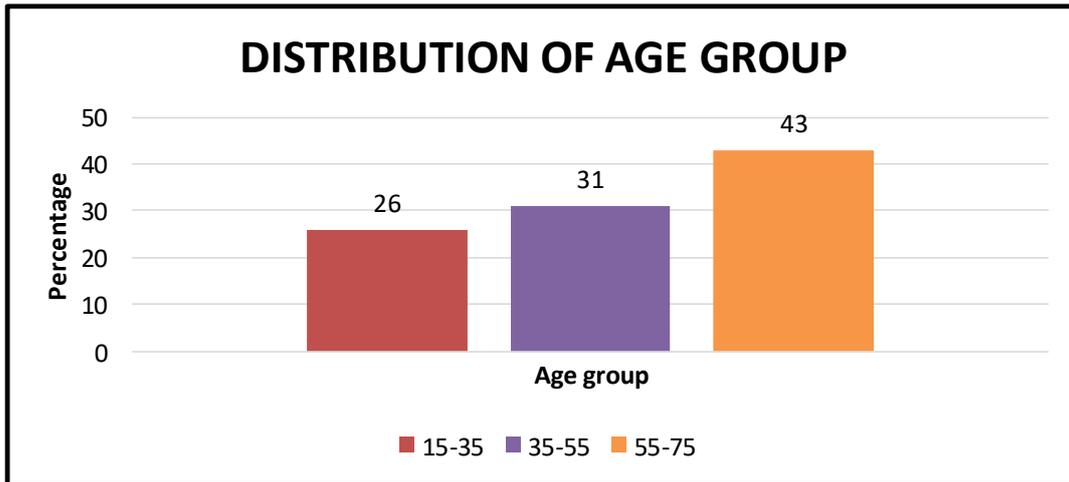


Fig. 1 - Distribution of age group.

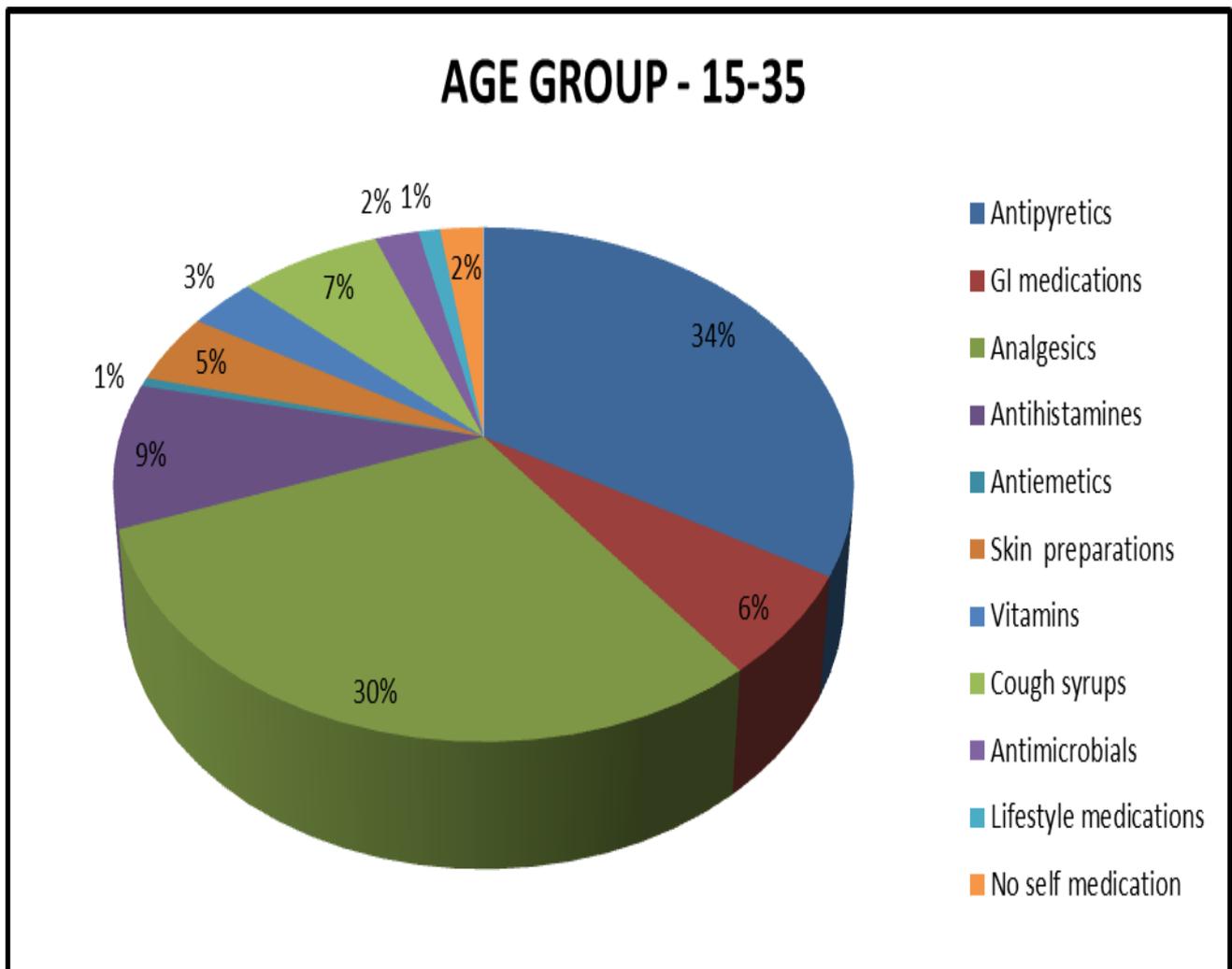


Fig .2- Categories of medicines preferred in different age groups.

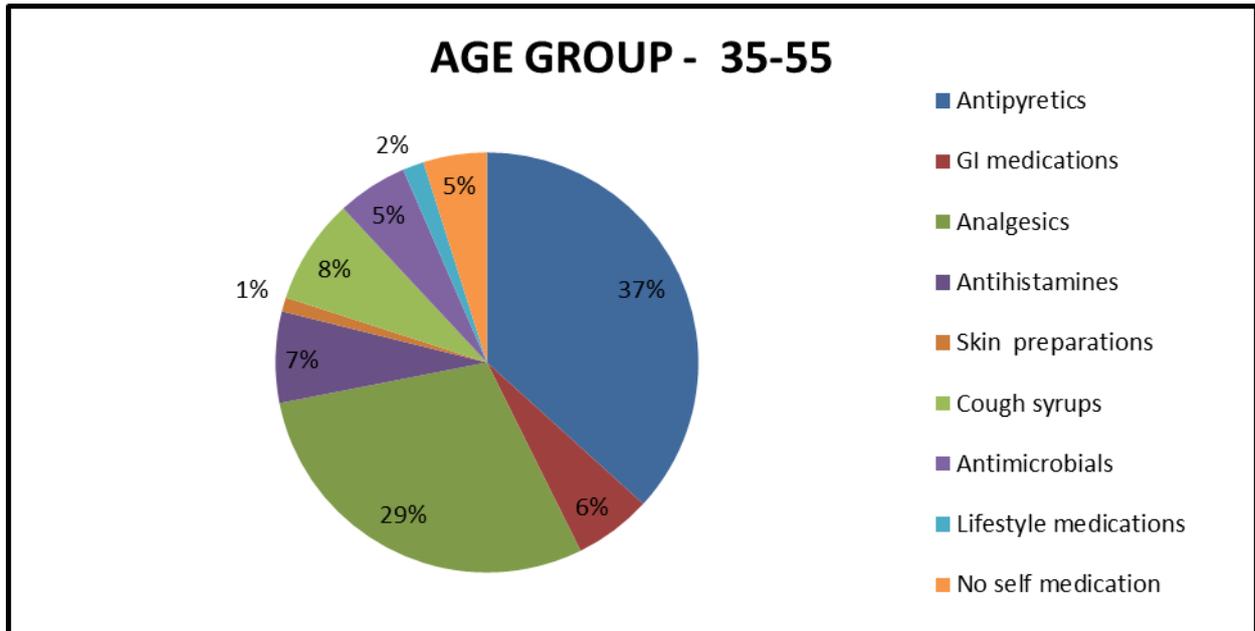


Fig. 2b - Categories of medicines preferred in 35-55 age group.

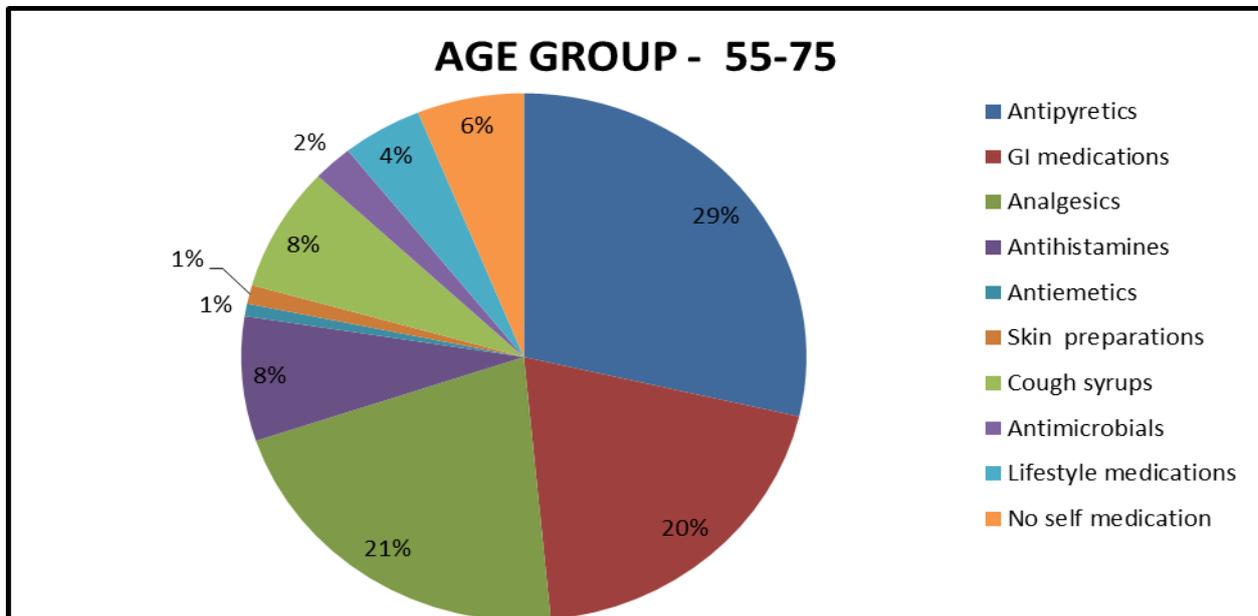


Fig. 2c - Categories of medicines preferred in 55-75 age group.

Table - Distribution of gender.

Si.no	Gender	Frequency	Percentage
1	Male	108	43
2	Female	142	57
	Total	250	100

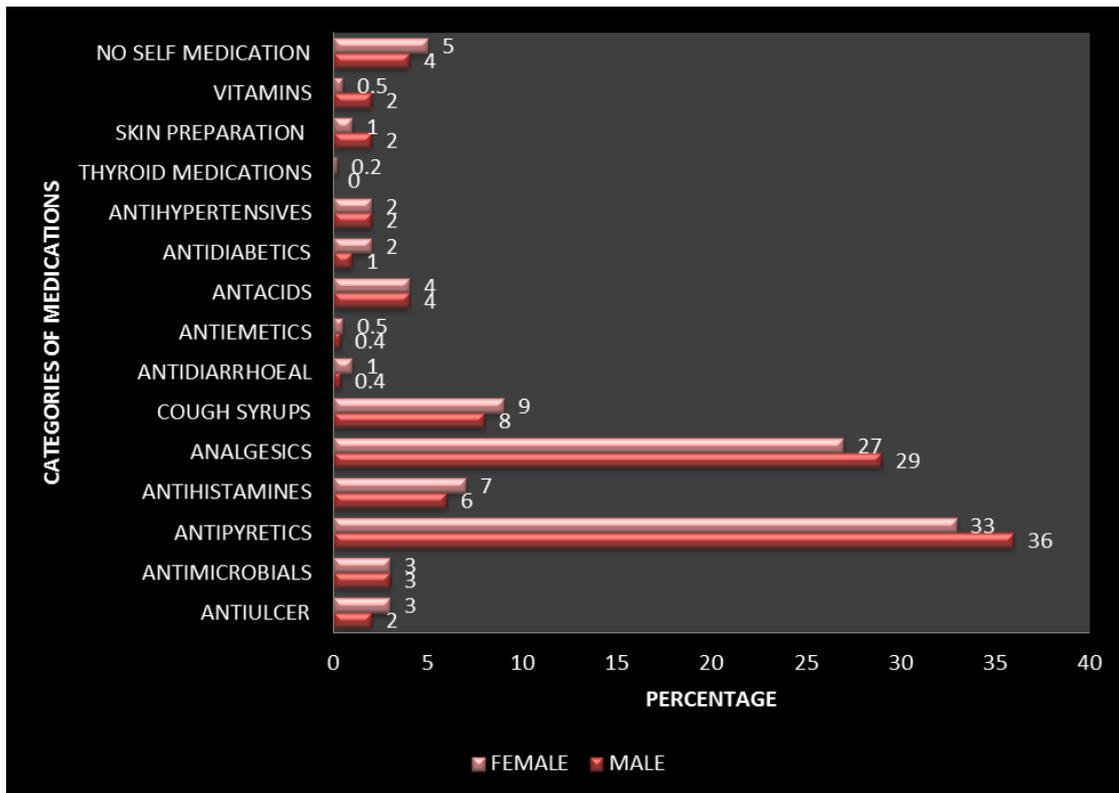


Fig.3 - Categories of medications according to gender.

Table 2 - Distribution of marital status.

Si.no	Marital status	Frequency	Percentage
1	Married	207	83
2	Unmarried	42	16
3	Divorced	0	0
4	Widowed	1	1
	Total	250	100

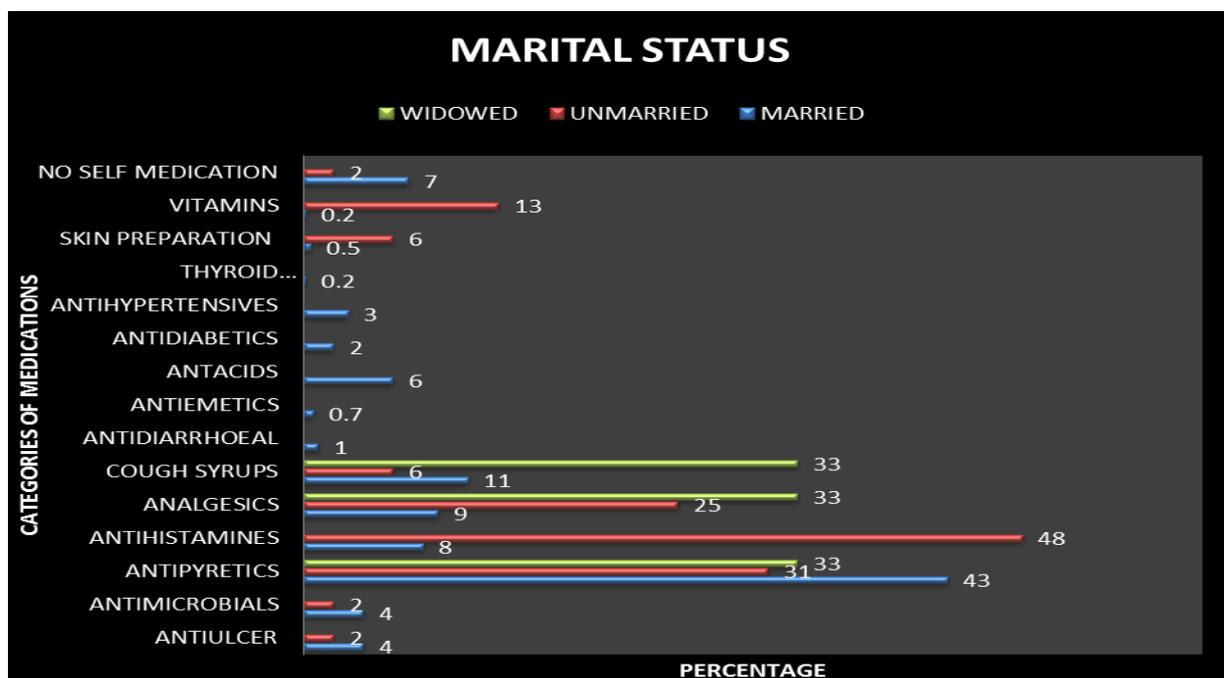


Fig. 4 - Categories of medications according to marital status.

Table 3- Distribution of educational status.

Si.no	Educational status	Frequency	Percentage
1	Illiterate	5	2
2	Under graduate	138	55
3	Graduate	98	39
4	Post graduate	4	2
5	Professional	5	2
	Total	250	100

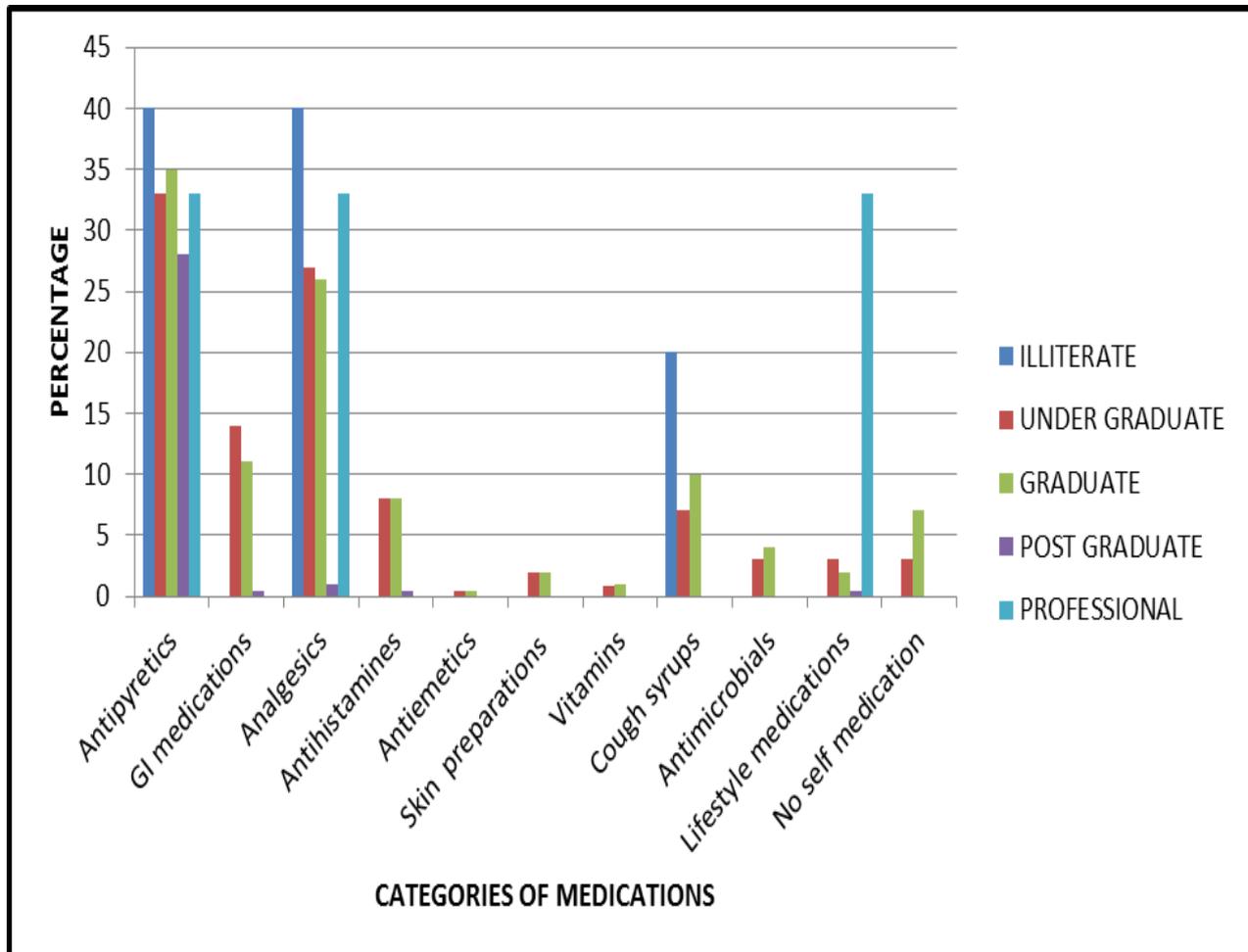


Fig.5 -Categories of medications according to educational status.

Table 4- Distribution of work status

Si.no	Work status	Frequency	Percentage
1	Student	34	14
2	Unemployed	84	34
3	Self employed	54	22
4	Private employed	58	23
5	Govt.employed	5	2
6	Retired	15	6
	Total	250	100

Fig. 6-Categories of medications according to work status.

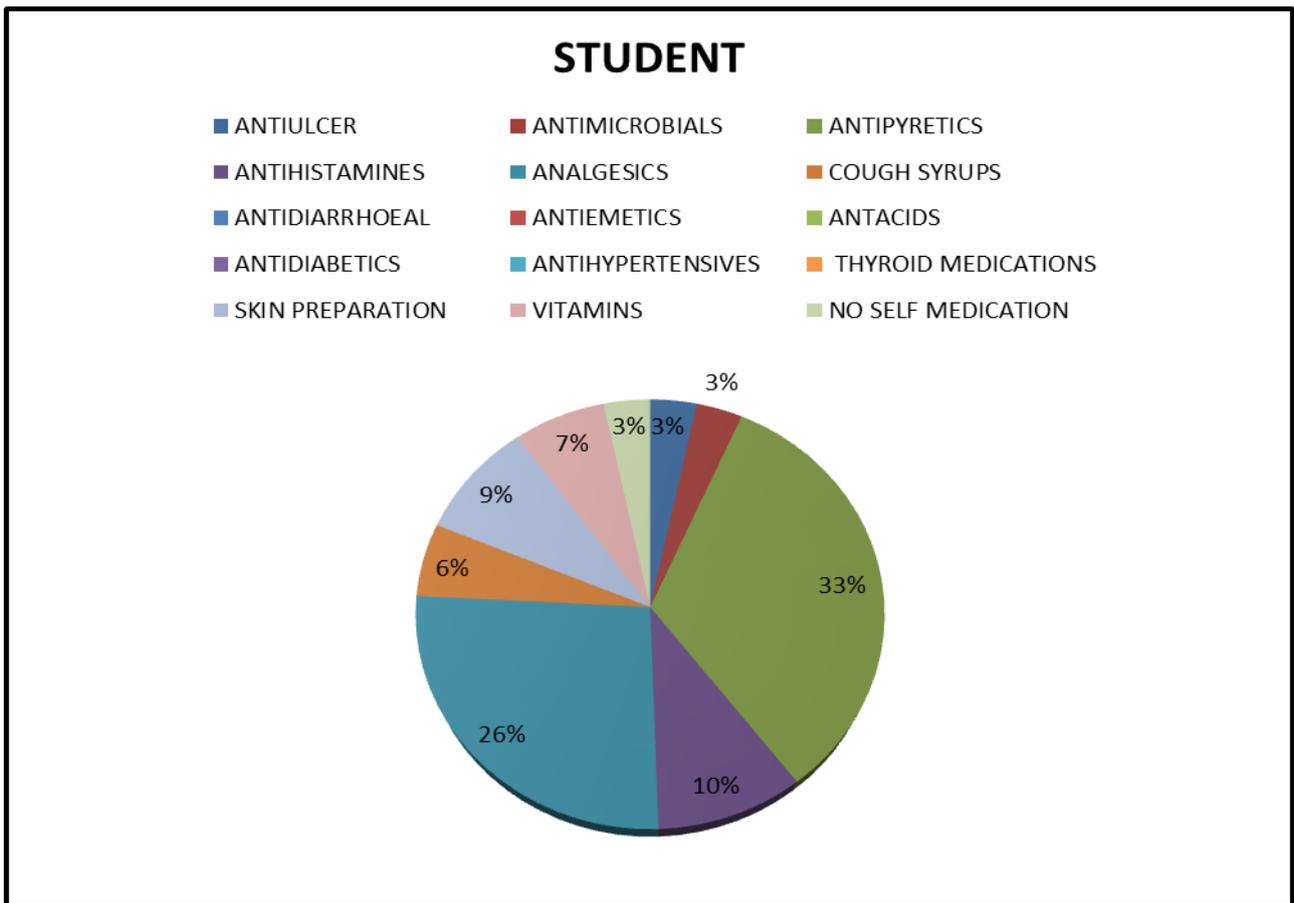


Fig. 6a-Categories of medications among students.

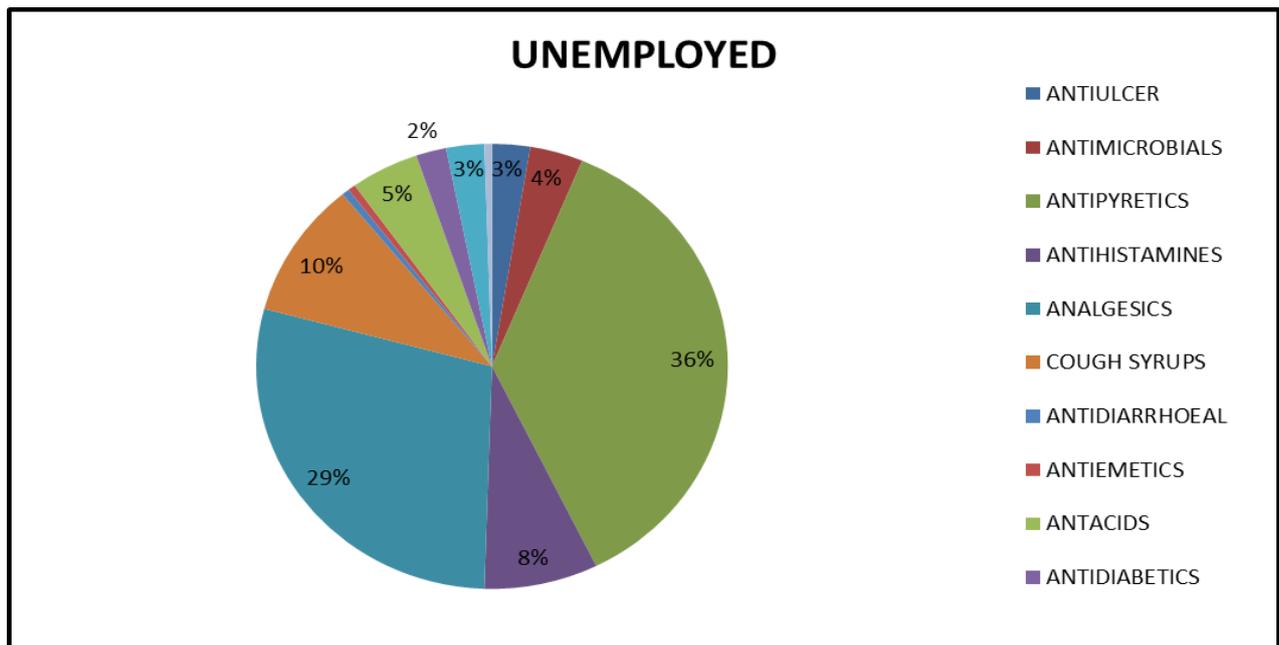


Fig. 6b-Categories of medications among unemployed.

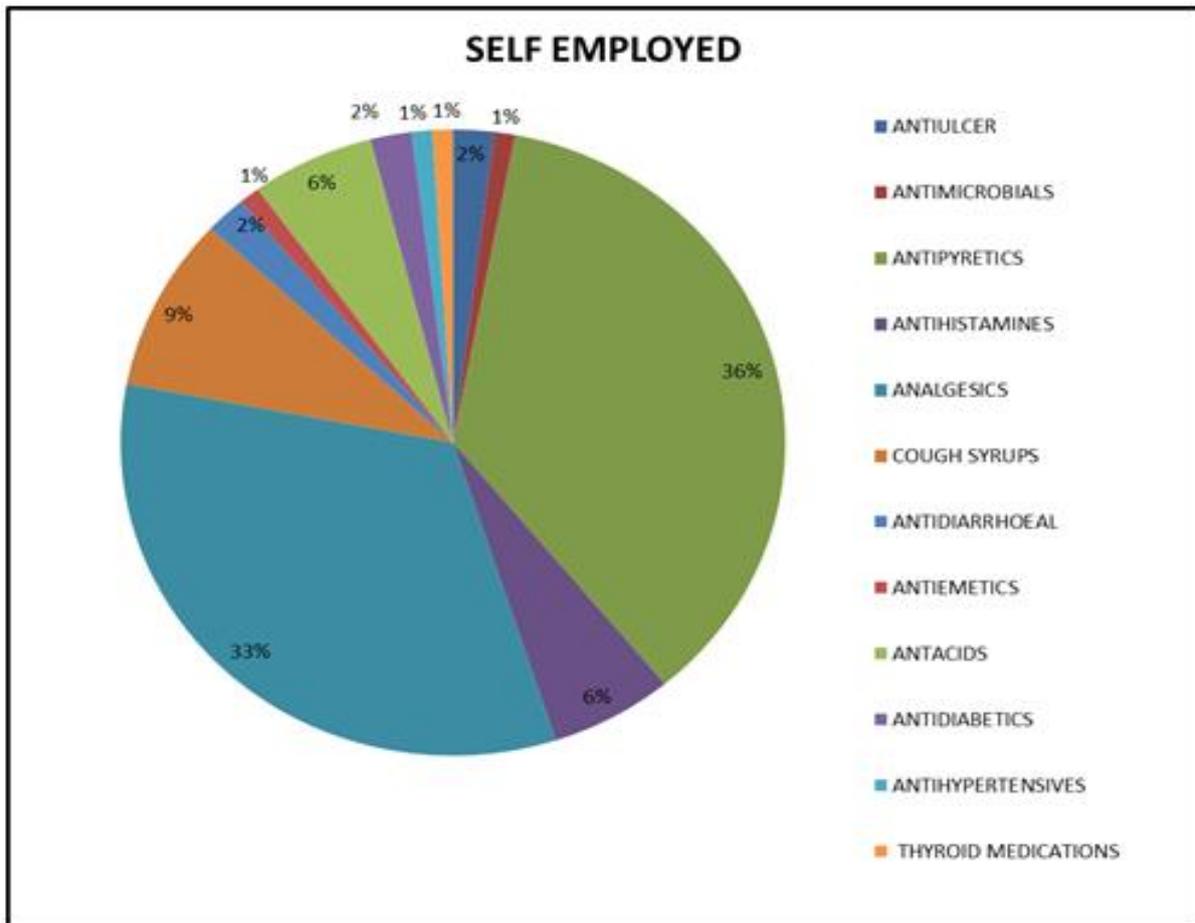


Fig. 6c- Categories of medications among self employed.

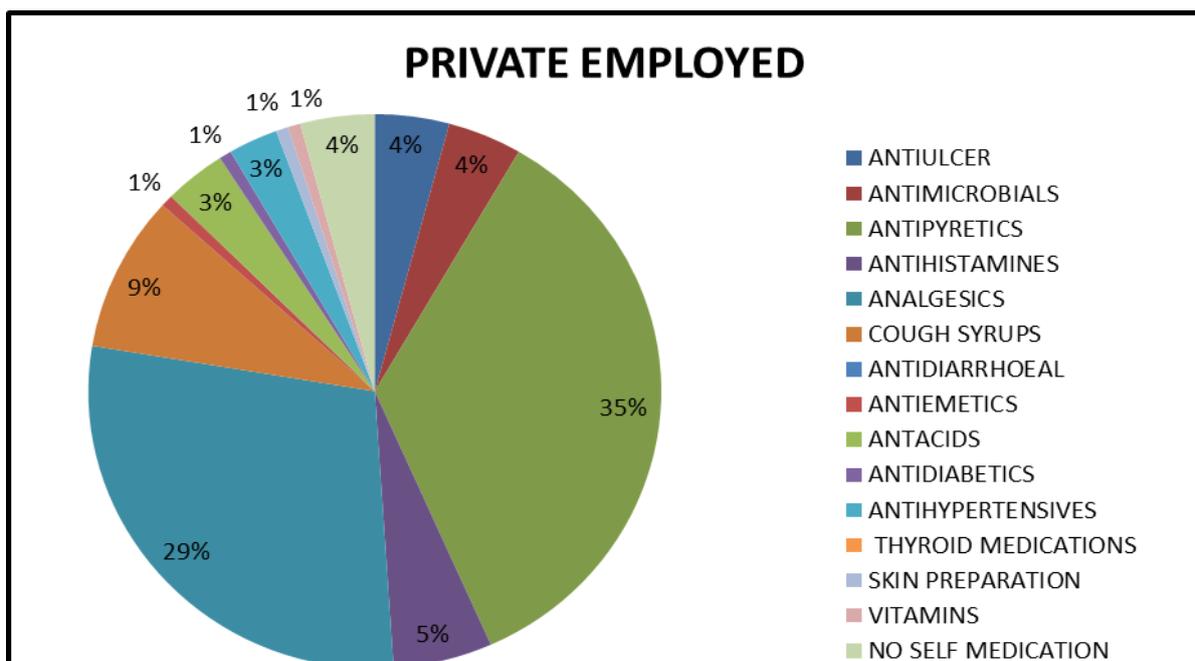


Fig. 6d- Categories of medications among private employed.

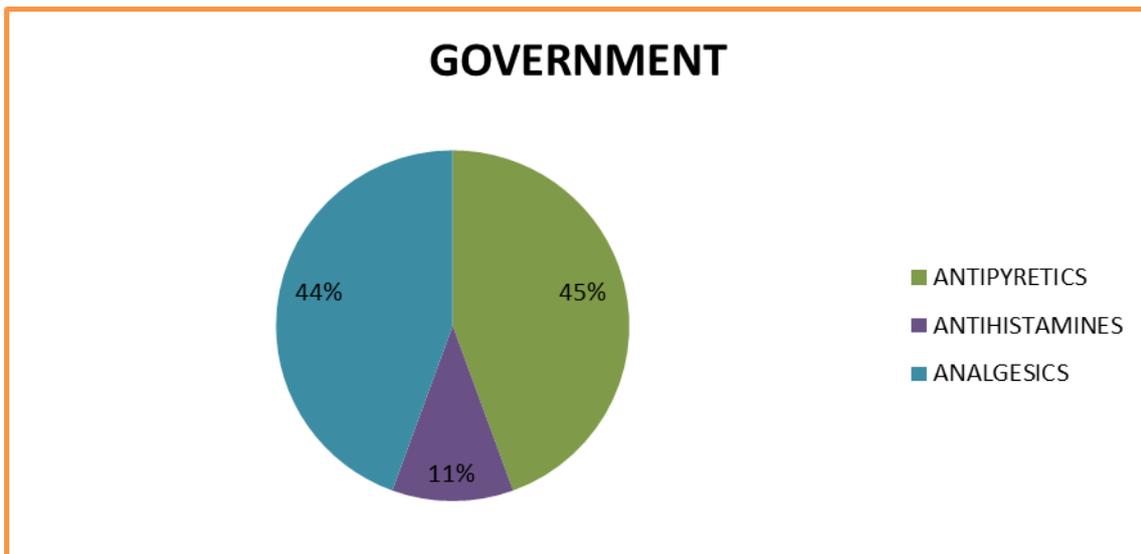


Fig. 6e-Categories of medications among government employed.

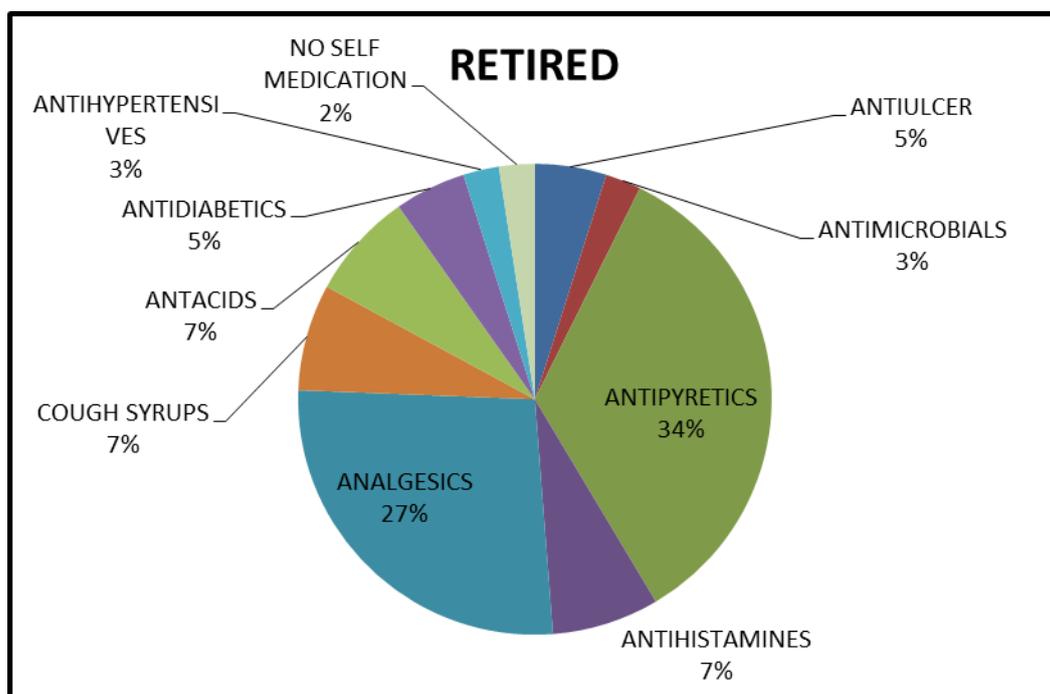


Fig. 6f-Categories of medications among retired.

Table 5- Distribution of financial status.

Si.no	Financial status	Frequency	Percentage
1	Low	28	11
2	Average	78	31
3	Good	135	54
4	Excellent	9	4
	Total	250	100

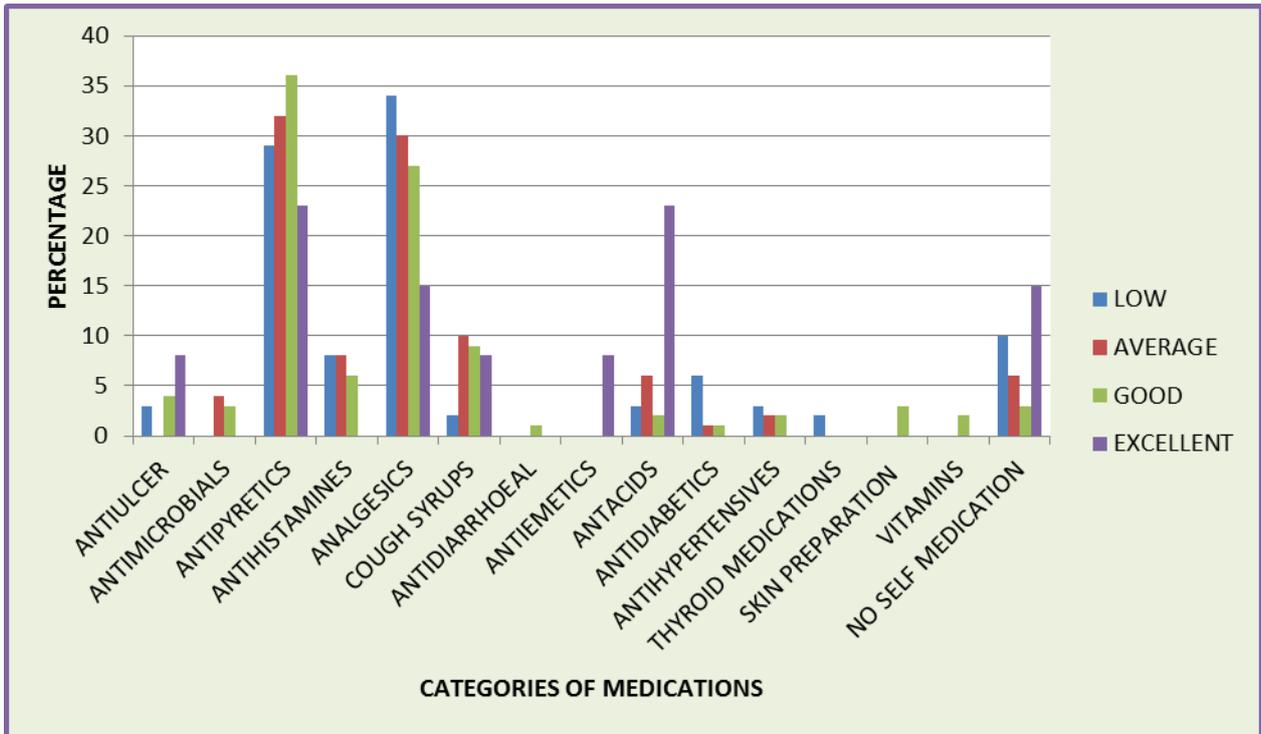


Fig.7 -Categories of medications according to financial status.

Table 6- Distribution of social status.

Si.no	Social status	Frequency	Percentage
1	Upper	4	2
2	Upper-middle	32	13
3	Middle	186	74
4	Lower	28	11
	Total	250	100

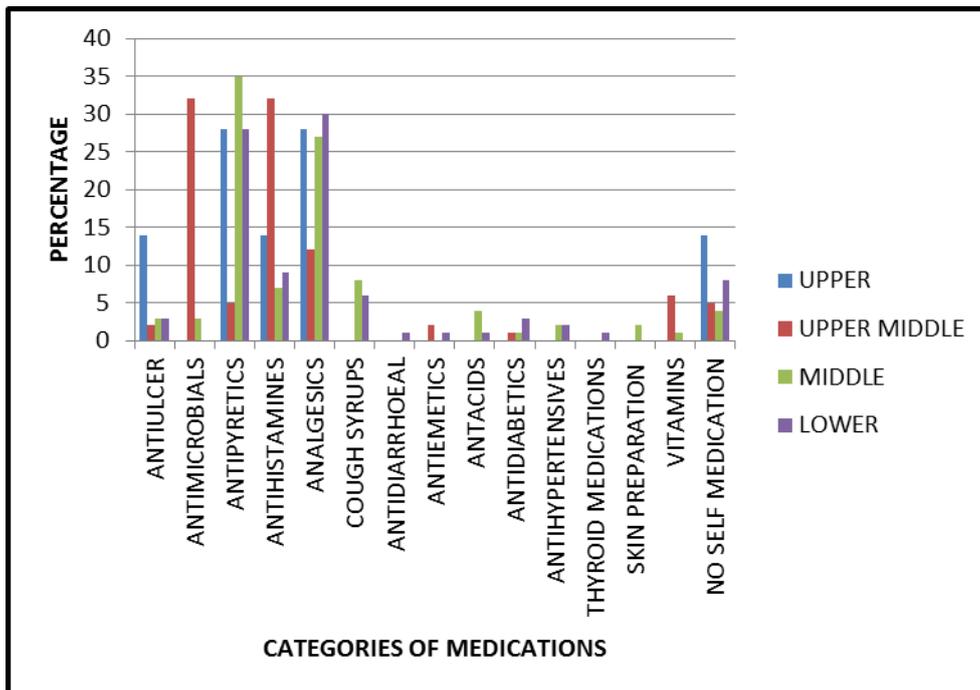


Fig. 8- Categories of medicines according to social status.

DISCUSSION

The study highlights that antipyretics, analgesics, GI medications, antihistamines and cough syrups were the major categories of medications preferred for self medication practice. This was supported by a prospective cross sectional study conducted by *Ibrahim et al.* which showed that analgesics, antipyretics and antihistamines were the most frequently used medicines.^[22] Another study carried out by *Keche Y et al.* which analyzed the self medication pattern in rural areas of Pune have shown that NSAIDs (33.33%) and GIT ailment drugs (13.61%) are the most commonly used drugs for self medication.^[23] Among the 250 participants, 26% were young aged, 31% were middle aged adults, 43% were elderly people. In 15-35 age group, antipyretics (34%), analgesics (30%), GI medications (6%), antihistamines (9%), cough syrups(8%) were mainly used. In 35-55 age group, antipyretics (39%), analgesics (31%), cough syrups(8%) were commonly used. In 55-75 age group, most commonly used medications were antipyretics (31%), analgesics (23%) and GI medications (21%). Self-medication practice was found to be more among younger persons. 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 pretested questionnaire which concluded that prevalence of self medication is more among younger people and Paracetamol and cough syrups were the most commonly used class of drugs.^[24]

Among the total 250 participants, 43% were males and 57% were females. Antipyretics and analgesics were the most commonly used categories of medications in both males and females. Prevalence of self medication was found to be higher in males. This was supported by a study carried out by *Selvaraj K et al.* which reported 17.8% prevalence among males and 5.4% prevalence among females.^[25] Study reports from India and neighbouring countries like Sri Lanka and Nepal had the same opinion.^[26,27,28] The reason behind increased use of self medication practice among males could be due to the neglecting nature of mild illnesses and to avoid loss of wages by spending time in hospitals. Among the married, antipyretics (43%) was the major category used for SMP while among the unmarried antihistamines (48%) were used. In this study, 55% were under graduates, 39% were graduates, 2% were post graduates, 2% were professionals and 2% were illiterate. Among undergraduates and graduates, antipyretics, analgesics and GI medications were the main categories preferred for SMP. Professionals preferred antipyretics (33%), analgesics (33%) and lifestyle medications (33%) while post graduates used antipyretics (28%). Based on occupation, 14% were students, 34% were unemployed, 22% were self employed, 23% were private employed, 2% were Government employed and 6% were retired people. Among all these groups, analgesics and antipyretics were most commonly used [students - antipyretics (33%) and analgesics (26%)]. Considering the financial status, analgesics and antipyretics were the

most reported categories of medications used. Other commonly used medications include antacids, antihistamines and cough syrups. Considering the social status, 2% belongs to upper social status, 13% to upper-middle status, 74% to middle status, 11% to lower social status. Antipyretics and analgesics were the mostly preferred categories of medications among all the groups.

CONCLUSION

The study concludes that antipyretics, analgesics, GI medications, antihistamines and cough syrups are the main categories of medicines used for self medication practice.

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REFERENCE

1. Araia, Z.Z., Gebregziabher, N.K. & Mesfun, A.B. Self medication practice and associated factors among students of Asmara College of Health Sciences, Eritrea: a cross sectional study. *J of Pharm Policy and Pract*, 2019. <https://doi.org/10.1186/s40545-019-0165-2>
2. Sonam Jain, Reetesh Malvi, Jeetendra Kumar Purviya, *International Journal of Pharmaceutical & Biological Archives*, 2011; 2(3): 831-836. published on June.
3. Afolabi AO. Factors influencing the pattern of self-medication in an adult Nigerian population, *Annals of African Medicine*, 2008; 7(3): 120-127.
4. Abdelmoneim A, Idris E, Lloyd M, Lukman T. Self medication with antibiotic and antimalarials in the community of Khartoum state, *J pharm Pharma Sci*, 2005; 8(2): 326-331.
5. Dayani G, Luciana MG, Graziela MA, Silvana CT. Responsible self-medication: review of the process of pharmaceutical attendance, *Brazilian J Pharm Sci*, 2009; 45(4): 625-633.
6. Davies JNP. Self-medication and patent medicines, *British Medical Journal*, 1944; 15: 87-89.
7. Pereira FSVT, Bucarechi F, Stephan C. Self-medication in children and adolescents. *J Pediatrics (Rio J)*, 2007; 83: 453-458.
8. Santos, Adriana Nancy Medeiros dos, Nogueira, Dulcinéia Rebecca Cappelletti, & Borja-Oliveira, Caroline Ribeiro de. Self-medication among participants of an Open University of the Third Age

- and associated factors. *Revista Brasileira de Geriatria e Gerontologia*, 2018; 21(4): 419-427.
9. Saharan, V. D., and M. S. Pandey. "A STUDY OF PREVALANCE OF SELF MEDICATION PRACTICE AMONG PEOPLE OF MUMBAI". *International Journal of Pharmacy and Pharmaceutical Sciences*, 2015; pp. 253-6.
 10. Goldsworthy RC, Mayhorn CB Prescription medication sharing among adolescents: Prevalence, risks, and outcomes. *J Adolesc Health*, 2009; 45: 634-637.
 11. Solomon W, Abede GM. Practice of self-medication in Jimma Town. *Ethiop J Health Dev*, 2003; 17: 111-6.
 12. Alemseged Beyene, Edomgenet Getachew, Askalech Dobocho, Estifanos Poulos, Kedija Abdurahman and Minyahil Alebachew; Knowledge, Attitude and Practice of Self Medication among Pharmacy Students of Rift Valley University, Abichu Campus, Addis Ababa, Ethiopia, 10.4172/2157-7420.1000269, *J Health Med Inform*, an open access journal Volume 8 ,Issue 3 , 1000269 ISSN: 2157-7420, *Journal of Health & Medical Informatics*.
 13. IJPBA, May - Jun, 2011, Vol. 2, Issue, 3 Self medication: Bennett PN, Brown MJ. *Clinical pharmacology*, 9 th ed. Churchill Livingstone, 2003; 25-26.
 14. Paul Rutter; Role of community pharmacists in patients' self-care and self-medication; *Integrated Pharmacy Research and Practice Dovepress journal* <http://dx.doi.org/10.2147/IPRP.S70403>
 15. *International journal of Pharmacy and Pharmaceutical sciences* ISSN- 0975-1491, 2016. Deena Johnsona, Hima S. Sekhara, Teena Alexa, M. Kumaraswamy, Rajveer Singh Chopraa
 16. Aster Desalew Kassie, Berhanu Boru Bifftu2 and Habtamu Sewunet Mekonnen, Self-medication practice and associated factors among adult household members in Meket district, Northeast Ethiopia, 2017. *BMC Pharmacology and Toxicology*
 17. Coelho RB, Costa FA. Impact of pharmaceutical counseling in minor health problems in rural Portugal. *Pharmacy Practice*, 2014; 12(4): 451.
 18. Sherine Ismail, Mohamed Osman, Rayf Abulezz, Hani Alhamdan and K H Mujtaba Quadri, Pharmacists as interprofessional collaborators and leaders through clinical pathways, [ncbi.nlm.nih.gov/pmc/articles/PMC5874563/](https://pubmed.ncbi.nlm.nih.gov/pmc/articles/PMC5874563/)
 19. Rather IA, Kim BC, Bajpay VK, Park YH, Self medication and antibiotic resistance :crisis,current challenges and prevention, *Saudi Journal of Biological Sciences*, 2017; 808-812.
 20. Zeind, Caroline, Pharmacists role in healthcare system [researchgate.net/publication/235418627](https://www.researchgate.net/publication/235418627)
 21. Assessment of self-medication practices with antibiotics among undergraduate university students in Rwanda Jacques Tuyishimire, Funmbi Okoya, Adebisi Yusuff Adebayo, Fabrice Humura, Don Eliseo Lucero-Prisno The Pan African Medical Journal, 2019; 33: 307. doi:10.11604/pamj.2019.33.307.18139
 22. Ibrahim DA, Halboup A. Self-medication Practice among Health Sciences Undergraduate Students in Sana'a City-Yemen. *ijpi [Internet]*, 2019.
 23. Keche Y, Yegnanarayan R, Bhoyar S, Agrawal R, Chavan R, Mahendrakar P. Self medication pattern in rural areas in Pune, India. *Int J Med Public Heal*, 2012; 2: 7.
 24. Kumar V, Mangal A, Yadav G, Raut D, Singh s. Prevalence and pattern of self medication practices in an urban area of Delhi, India, *Med J DY Patil Uniy*, 2015; 8: 16-20.
 25. Selvaraj K, Kumar SG, Ramalingam A. Prevalence of self-medication practices and its associated factors in Urban Puducherry, India. *Perspect Clin Res*, 2014; 5(1): 32-36. doi:10.4103/2229-3485.124569
 26. Deshpande SG, Tiwari R. Self medication: A growing concern. *Indian J Med Sci*, 1997; 51: 93-6.
 27. Shankar PR, Partha P, Shenoy N. Self-medication and non-doctor prescription practices in Pokhara valley, Western Nepal: A questionnaire-based study. *BMC Fam Pract*, 2002; 3: 17.
 28. Wijesinghea PR, Jayakodyb RL, de A Seneviratnec R. Prevalence and predictors of self-medication in a selected urban and rural district of Sri Lanka. *Who South-East Asia J Public Heal*, 2012; 1: 28-41.