

A Community Based Study to Identify the Self-Medication Practices among Pediatric Population

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ABSTRACT

Self-medication refers to patients who use non-prescription medicines, usually over-the-counter (OTC) drugs, to treat certain 'minor' ailments themselves without consulting a medical practitioner and without any medical supervision. Self-medication is the self-consumption of medication without getting an advice from the physician for either diagnosis or treatment. About 22 (15%) of the subjects are always self-medicated whereas 57 (38%) go for self-medication only sometimes while the rest 71 (47%) are never self-medicated. Here it can be seen that majority of the study population do not practice self-medication. When the pattern of self-medication is analysed age wise as in figure 1, it is seen that between age 1-5 years only 1 patient is self-medicated always, 19 sometimes and 35 never while in age between 6-10 years 6 always, 29 sometimes and 18 never and in age group 11-18 about 15 always, 23 sometimes and 4 never undergoes self-medication. Therefore, it is seen that as the age group increases self-medication increases. 0-5 year age group participants are the one with lowest self-medication while 11-18 age group has the highest self-medication found. There are several reasons for self-medication usually it is due to time constraint, knowledge about illness and medicine or ineffective prescription. The pediatric population, being a special population is in need of more vigilance and care to avoid self-medication errors and toxicity. Over the years, drugs like antibiotics have been over used beyond control in the pediatric population resulting in widespread resistance and there is a need to control this and promote judicious and efficacious drug use.

Keywords: self-medication, pediatric population

INTRODUCTION

Self-medication refers to patients who use non-prescription medicines, usually over-the-counter (OTC) drugs, to treat certain 'minor' ailments themselves without consulting a medical practitioner and without any medical supervision¹. In pediatric context, self-medication implies administration of medication by the care giver without medical consultation¹. Parents sometimes exhibit the practice of self-medication for the diseases of their children. The success of providing rational drug use for children is depending on the attitude of the parents. The pediatric population ranges from the age of 0-18 years, i.e.; from infancy to adolescence^{2, 3}. Today, children take responsibility for their medications at different ages; children often take responsibility for taking medications at a young age especially when they are suffering from chronic conditions. Children aged 16-18 years are observed to self-medicate for minor ailments like cold, fever, headache and pain. Hence this population is at a greater risk of medication errors and there is a need to improve the pediatric medication safety⁵.

Younger children are more often given medications by their parents, whereas older adolescents may self-medicate. Pediatric OTC medications cover a wide range of medications including cough, cold medicines, antipyretic, analgesics (e.g. paracetamol and ibuprofen), vitamin supplements and skin products, etc. This will account for the vast majority of all

pediatric OTC drugs². Most of the pediatric OTC drugs, such as vitamin supplements and dermatological preparations, are safe when used properly, i.e. according to the package insert. Nevertheless, parents and adolescents may have insufficient knowledge regarding the medicines they use, which can lead to the inappropriate medication use – even to serious, adverse drug effects among self-medicating children and adolescents.

Various reasons for self-medication time constraint, knowledge about illness and medicine and Ineffective prescription⁷.

Self-medication has both benefits and risks. The responsible self-medication can save the scarcity of medical resources from being wasted on minor illness, reduce the burden on health care facilities and decrease the cost and time people spend to visit health care facilities for minor symptoms. Most of them used previous prescription to procure the drugs and previous experience on efficacy⁸. However, inappropriate self-medication can have a number of potential risks for example delay in seeking appropriate medical advice; failure to recognize or self-diagnose contraindications, interactions with prescribed medicinal products; failure to report current self-medications to the prescribing physician (risk of double medication and/or harmful interaction); inappropriate duration of use of medicine; risk of dependence and abuse⁶.

The main problem with self-medication with antibiotics is the emergence of resistance. A clear relationship exists between microbial resistance and amount of antibiotic use⁴. Other causes of antibiotic resistance are clinician's over-prescription, antibiotic overuse, a strong belief by the public in antibiotics such as hoarding and non-prescription purchase. Other human malpractices that have contributed to the emergence and spread of antibiotic resistance include inappropriate antibiotic use, inadequate dosing and incomplete doses⁸. Few number of pediatric OTC drugs have been adequately tested for safety and

efficacy among child populations; the dosages of most pediatric OTC drugs have been extrapolated from pharmacological and adult clinical data.

LITERATURE REVIEW

1. Aster Desalew Kassie *et al.*, conducted a study in Meket District, Northeast Ethiopia on Self-medication practice and associated factors among adult household members. The purpose of this study was to assess the Self-medication practice and associated factors among adult household members. It is a community based cross-sectional study was conducted in the number of 722 adult household members. A systematic random sampling method was used to pick out study participants. A pre-tested, structured set of questions was used for data collection using an interviewer-administered technique. The major troubles linked with self-medication practice have been drug resistance, medication side effects, misapplication of resources, and serious health hazards including death. More than one-third of the study members practiced self-medication. They concluded that the reasons for self-medication are previous experience of self-medication, accessibility of pharmacies and presence of medication at home. Thus, strengthening communities' appraised on drug side effects and integrated efforts of individuals, communities, health facilities, and regulatory bodies are highly mandatory.
2. Abdul-Mohsin Jassim conducted a study on prevalence of self-medication with antimicrobial drugs and to record the stored medicine at home. The aim of this study was to evaluate the prevalence of self-medication with antimicrobial drugs and to record the stored medicine at home. A number of questions were inquired, namely; whether and why drugs were kept at home; where accurately the drugs were being stored; whether the drugs had been prescribed

by a physician; whether the drugs were presently being used; if they had been prescribed for previous infections (leftover drugs) or were being kept for future use (standby drugs). A survey was conducted in 300 households to determine the availability, source, and storage conditions of medicinal drugs and the currency of self-medication with antimicrobials. The subjects were also asked whether they exchanged drugs among the family members and their relatives, friends or neighbours, and if they normally completed the prescribed dose. A larger part of the families (78%) admitted to practicing self-medication. The larger part of households (94%) stored drugs at home. They come to an end that there are numerous manifestations of inappropriate storage, self-medication, poor compliance and use of drugs that have been kept beyond their expiry date.

3. Pereira FS *et al.*, conducted a study on Self-medication in children and adolescents. To govern the currency of self-medication in children and adolescents in the municipalities of Limeira and Piracicaba and to correlate the results with sociodemographic markers and with apply of health care services. It is a Descriptive population-based study. In this study the prevalence of self-medication was 56.6%. Mothers and drugstore employees were most frequently responsible for self-medication. The leading groups of self-prescribed drugs were: pain killers and non-hormonal anti-inflammatory drugs, respiratory and gastrological drugs and systemic antibiotics. The circumstances that most commonly motivated self-medication were respiratory diseases (17.2%), fever (15%), and headache (14%). The subjects in the age group of 7-18 years and public health care users showed increased risk for self-medication. They draw to a close that the prevalence of self-medication in

children and adolescents was high, which reinforces the need for public health interventions aiming at preventing this practice.

MATERIALS & METHODS

A prospective community based observational study was carried out within district headquarters, Karnataka for a period of 6 months' duration from august 2019 to February 2020. The study protocol was approved by the Institutional Ethics Committee (IEC). The study included patients of age 18 years and below and patient on medication for any illness (current or chronic). The study excluded patients above 18 years and patients who are homeless or do not have a proper place to stay.

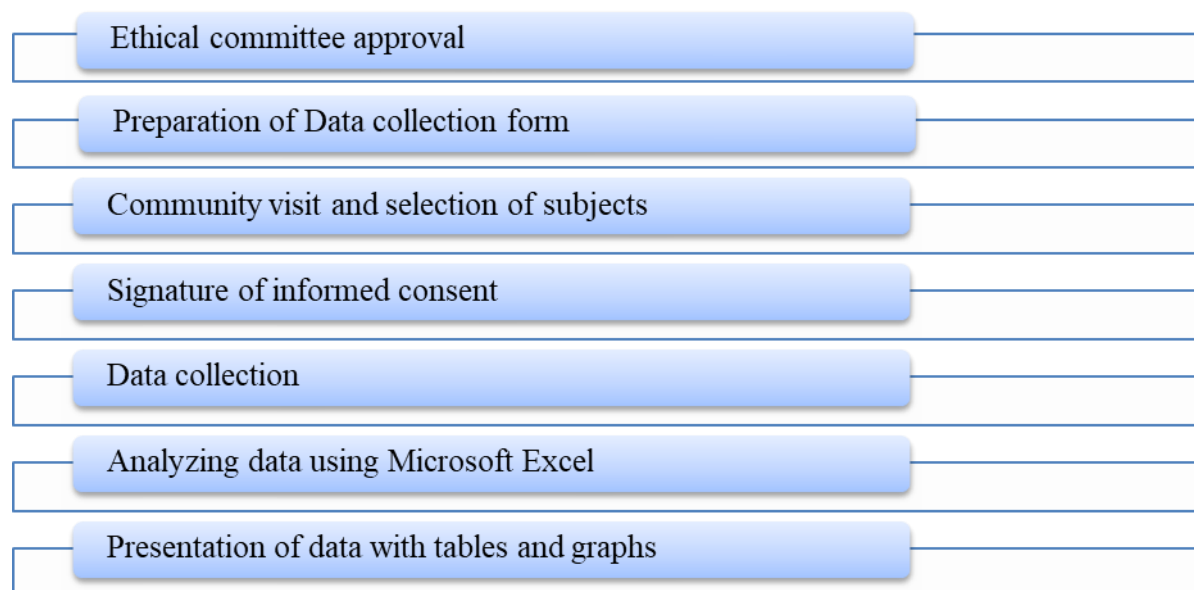
Source of data: The data for study was taken from the patient's caregiver/parents which consists of prescriptions, case files, various test reports, medication formulations which are present at home that are used by the pediatric population.

Sampling method: Various houses in different places of District headquarters with pediatric population who meets the required criteria were visited between august 2019 to February 2020. A total of 150 study subjects were included in the study which may include more than one subject from the same household who satisfy the selection criteria.

Study method: A specially designed data collection form will be used to collect the data from the patients who are eligible for the study. Data collected includes demographic details, presenting complaints, medical & medication history, diagnosis, treatment including dose, frequency, formulation, duration and patient progress. All the details will be kept confidential.

Data Analysis: The collected data will be analyzed using Microsoft Excel 2010. The filters are used to separate the different groups of the study population for scrutiny of the study.

Operation modality:



RESULT

Table 1-Self - medication pattern in pediatrics

FREQUENCY OF SELF MEDICATION	STUDY PARTICIPANTS
ALWAYS	22 (15%)
SOMETIMES	57 (38%)
NEVER	71 (47%)

Table 2-Reasons for self- medication

REASONS FOR SELF MEDICATION	STUDY PARTICIPANTS
TIME CONSTRAINT	33(35.48%)
KNOWLEDGE ABOUT ILLNESS AND MEDICINE	53(56.98%)
INEFFECTIVE PRESCRIPTION	7(7.52%)

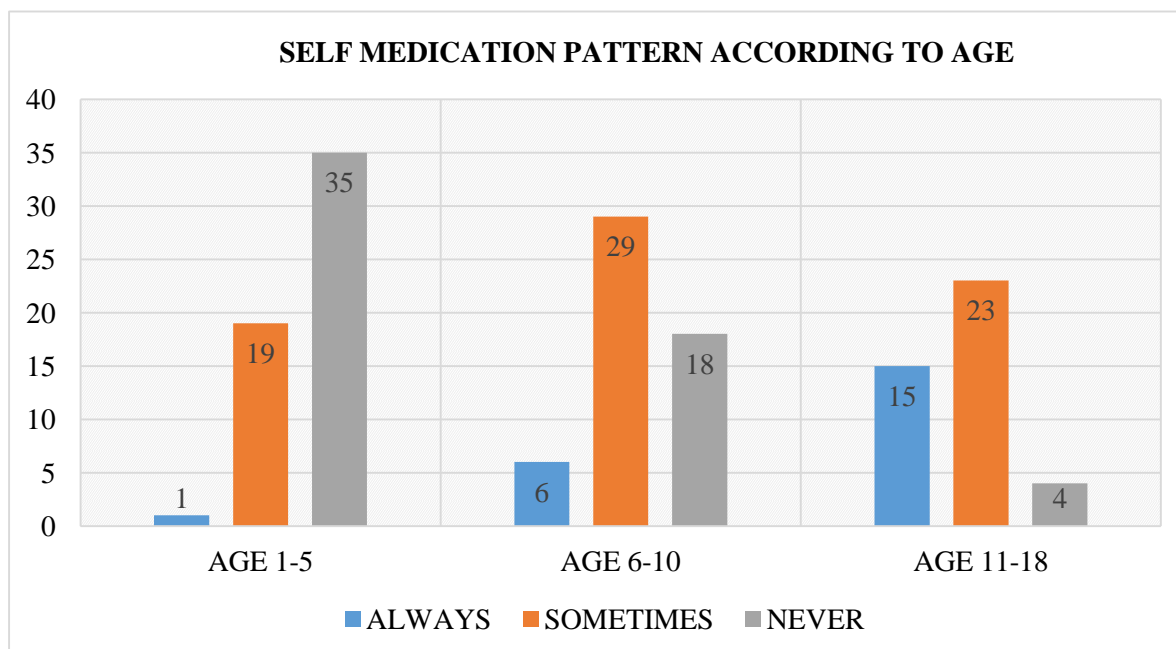


Figure 1-Self - medication pattern according to age

Self-medication is the self-utilization of medication without getting a piece of advice from the physician for any diagnosis or treatment. It is seen as in table 2 that about 22 (15%) of the subjects are always

self - medicated whereas 57 (38%) go for self-medication only sometimes while the rest 71 (47%) are never self-medicated. Here it can be seen that majority of the study population do not practice self-

medication. When the pattern of self-medication is analyzed age wise as in figure 6, it is seen that between age 1-5 years only 1 patient is self-medicated always, 19 sometimes and 35 never while in age between 6-10 years 6 always, 29 sometimes and 18 never and in age group 11-18 about 15 always, 23 sometimes and 4 never undergoes self-medication. Therefore, it is seen that as the age group increases self-medication increases. 0-5 year age group participants are the one with lowest self-medication while 11-18 age group has the highest self-medication found. There are several reasons for self-medication usually it is due to time constraint, knowledge about illness and medicine or ineffective prescription. Among the subjects who practice self-medication which is about 93 (62%) it can be seen that the reason for self-medication due to time constraint were 33(35.48%), knowledge about illness and medicine 53(56.98%) and ineffective prescription 7(7.52%).

DISCUSSION

Self-medication is an uprising dilemma in the society among pediatric population especially due to their easy availability and flexibility in the system. In this study more than half (53%) of the population practiced self-medication either always or sometimes. This result has been similar to several studies conducted in this field. Francis S V T Pereira *et al.*, conducted a study on self-medication in children and adolescents and found that more than half of the population were self-medicated.

It was seen that the drugs usually used for self-medication are OTC medications especially for fever, cold, cough. It has been seen that when a patient visits the physician with a particular complain, the follow up is not done properly by the patient. If the same symptoms are seen in the patient again it is most likely that a prescription refill is done or if the remaining of the previous prescription's drugs are present it is used.

It has been seen that 53% of the study participants / caregiver goes for self-medication because of the knowledge regarding the illness and medication which is similar to the study conducted by Umar Farooq Gohar *et al.*, where the perception of illness that might be due to previous experience of sickness or some knowledge accounts for about 35% of the population. The same article also says time constraint is another factor which constitutes to about 33% in our study.

CONCLUSION

This study of self-medication in pediatric population showed that more than half of the populations were self-medicated. It was seen that the drugs usually used for self-medication are OTC medications especially for fever, cold, cough. When a patient visits the physician with a particular complain, it is noticed that the follow up is not done properly by the patient. If the same symptoms are seen in the patient again it is most likely that a prescription refill is done or the remaining of the previous prescription drugs which are present at home is used and previous experience on efficacy of the drug is the commonest reason. Self-medication is more habitual in older children than younger children. The pediatric population, being a special population is in need of more vigilance and care to avoid self-medication errors and toxicity. Over the years, drugs like antibiotics have been over used beyond control in the pediatric population resulting in widespread resistance and there is a need to control this and promote judicious and efficacious drug use.

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