

Assessment Of Adverse Drug Reactions(ADRS) Due To Self-Medication, Mysuru, South India – A Cross Sectional Study.

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ABSTRACT:

Introduction: Self-medication involves acquiring medicines without a prescription, resubmitting old prescriptions to purchase medicines, sharing medicines with relatives or members of one's social circle or using leftover medicines stored at home.

Objectives: To assess the Adverse Drug Reactions related to self-medication among the people residing in urban area of Mysuru, South India.

Methodology: It is a cross-sectional study done among the urban area of Mysuru, Karnataka, South India. Sample size was calculated to 383 and Systematic Random Sampling technique was used to collect the data.

Results: The overall usage of self-medication was found to be 73.3%. In this study majority of the participants are using self medication for minor ailments like headache, bodyache, flu and cough. Main reasons for practicing self medication are economic constraints, time saving and quick relief upon self-medication. 24.9% of self-medication users experienced ADRs. Majority of them were mild. Main drugs caused adverse reactions are antihistamines, antitussives and antibiotics.

Conclusion: Nearly 2/3rd of the study participants practiced self-medication. Health education practices regarding the inappropriate use of medicines and their adverse effects to the public has to be increased.

KEYWORDS: Attitude, knowledge, Practices, Prescription drug misuse, Self-care.

I. INTRODUCTION:

Self-medication is defined as the use of medicinal products by the individuals to treat self-recognized disorders or symptoms, or the intermittent or continuous use of a medication prescribed by a physician for chronic or recurring diseases or symptoms. Self-medication involves obtaining drugs without a proper prescription, using old prescriptions to buy drugs, exchanging medicines with relatives and friends, or utilizing unused medicines stored at home. (1) This practice

has been reported as being on the rise and has become a public health concern. People in developing countries are consuming drugs prescribed by healthcare professionals without their supervision. The World Health Organization has underlined the importance of the rational practice of self-medication. The studies conducted among slum communities in India have shown varying estimates of Self-medication practices and these variations could be due to regional differences in socioeconomic factors, healthcare-seeking behaviors, and availability and accessibility of healthcare facilities.

Nowadays rates of self-medication are likely to be increased because of fear and desperation of self-protection due to the ongoing COVID19 pandemic in India. Individuals are consuming medications on their own without any prior knowledge of medicines making the situation challenging and increasing the risk of adverse events. Self-medication in long-term usage results in disastrous consequences if the risk-benefit ratio of medicine is not known. The common drugs used as self-medication for treating COVID19 were azithromycin, hydroxychloroquine, NSAIDs, anti-retroviral like favipiravir, lopinavir, remdesivir. (2)

Drugs and Cosmetics Act of 1940 as well as the Drugs and Cosmetics Rules of 1945 govern the import, manufacturing, distribution, and sale of drugs and cosmetics, and that OTC has no legal implications in India. Even though OTC drugs are meant for self-medication, a lack of knowledge regarding the adverse effects, dosages, their exact uses, and taking them without proper prescription will increase the risk. (3)

The current study was carried out to find the usage of self medicated drugs and Adverse Drug Reactions arises from self-medication.

II. MATERIALS AND METHODS:

It's a cross sectional study conducted in Mysuru, Karnataka, Southern India. Sample size was calculated using the prevalence of 47% according to the study conducted by Pranav et.al,

For a proportion of 47% (P) of the above study with an absolute precision of 5% and CI of 95%, a sample size of 383 was derived for the study. Random Sampling method was used to select the households. Data was collected using pre designed questionnaire. Data were entered in Microsoft excel 2019 and statistical analysis was done using SPSS version 25(IBM Corp, USA). Descriptive statistical measures were expressed in frequencies, percentages, mean and standard deviation. Data was represented in tables and graphs as relevant. Severity of ADRs were classified according to the WHO ADRs classification list.

III. RESULTS:

The age of the study participants ranges from 19 to 75 years with a mean of 39.53 ± 11.68 . 212(55.4%) of the study participants are females and the rest 171(44.6%) are males. 352(91.9%) of the participants belong to the Hindu religion and 14(3.7%) people belong to the Christian religion. 149(38.9%) of the study participants were

diploma/degree holders with the least 14(3.7%) of participants having studied post-graduation. 227(59.3%) of the participants are semi-skilled laborers and 6(1.6%) people are retired. 166(43.3%) of study participants belonged to socioeconomic class II with per capita income of Rs3504-7007 per month and the 1(0.3%) belonged to socioeconomic class V with per capita income of Rs1050 and below per month, according to the modified BG prasad scale.

Usage of Self Medication:

Overall prevalence of self-medication was found to be 73% with females are practising more than males (figure-1). 297(77.5%) of the participants are practicing self-medication (figure-2) to treat headache or body ache and the least was to treat skin allergies i.e., 2(0.5%). 298(92%) of the study participants opined that the most commonly used drugs were analgesics and 9(3.2%) opined that the least used were multivitamins (figure-3).

Figure-1: Self-medication usage

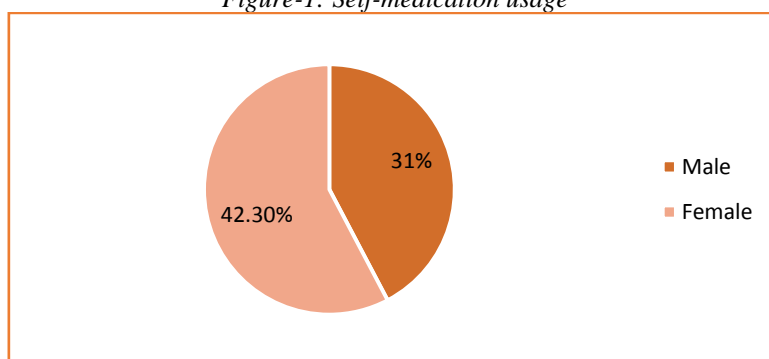


Figure-2: Conditions for practising self medication

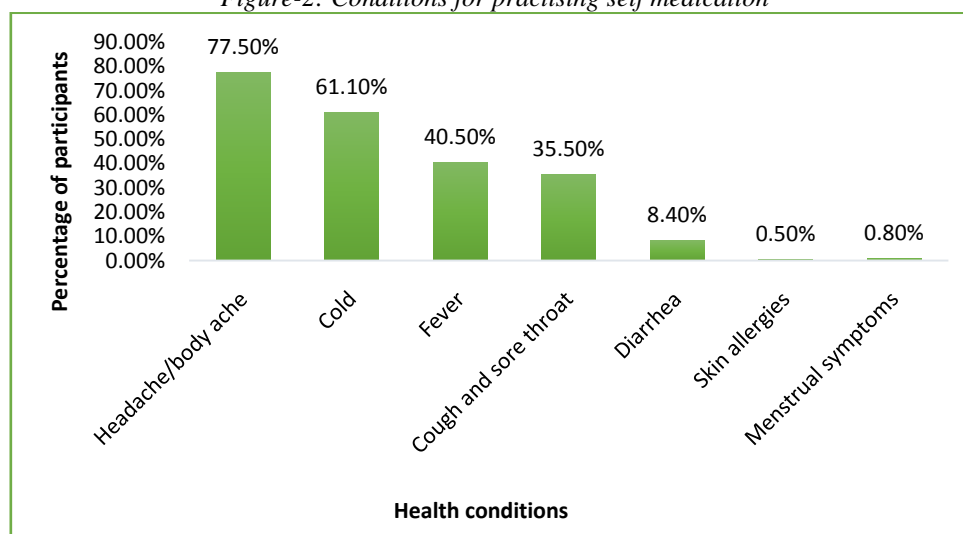
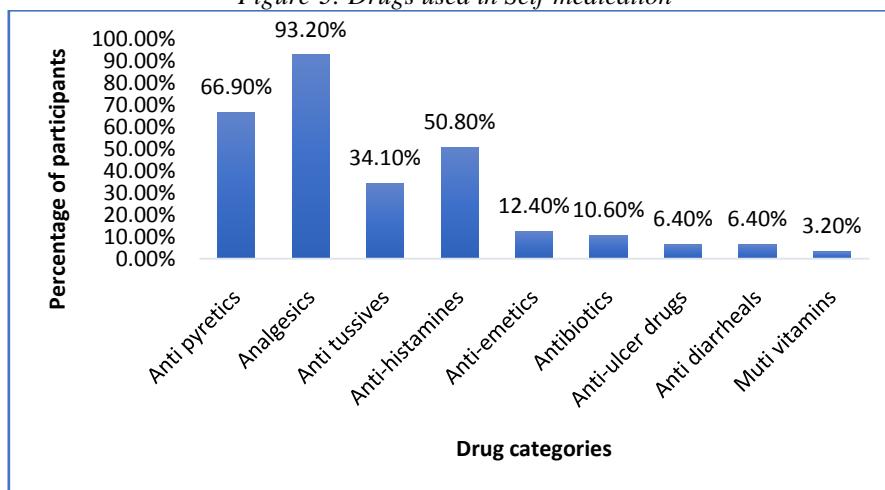


Figure-3: Drugs used in Self-medication



Adverse Drug Reaction's related to self-medication

Out of 281 who are practising self-medication 24.9% (n=70) had experienced ADRs (figure-4). Majority of the people consulted doctor (57%, n=70) after ADR incidence. Main reactions occurred were vomiting (42.8%), Diarrhea (28%), skin rashes (14%) and

headache (14%) (figure-5). Almost half of the subjects who had experienced ADRs had Mild ADR (57%) and very few had severe ADRs (11.4%) that too in the form of severe diarrhea and vomiting lasted for days. Main drugs caused ADRs are antihistamines (31%), followed by antitussives (26%) and antibiotics (14%) (figure-6).

Figure-4: Occurrence of ADRs (n=281)

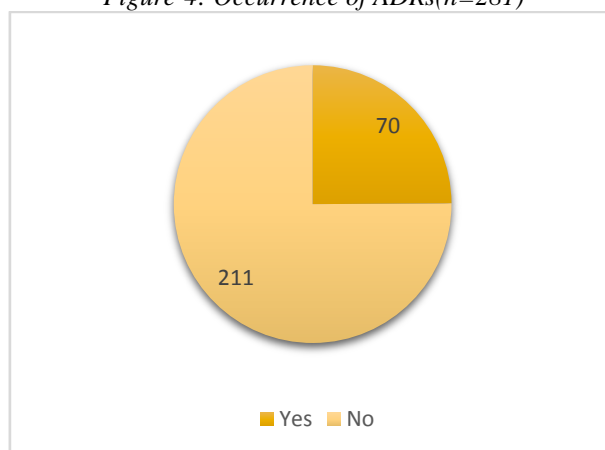


Figure-5: ADRs experienced by the participants

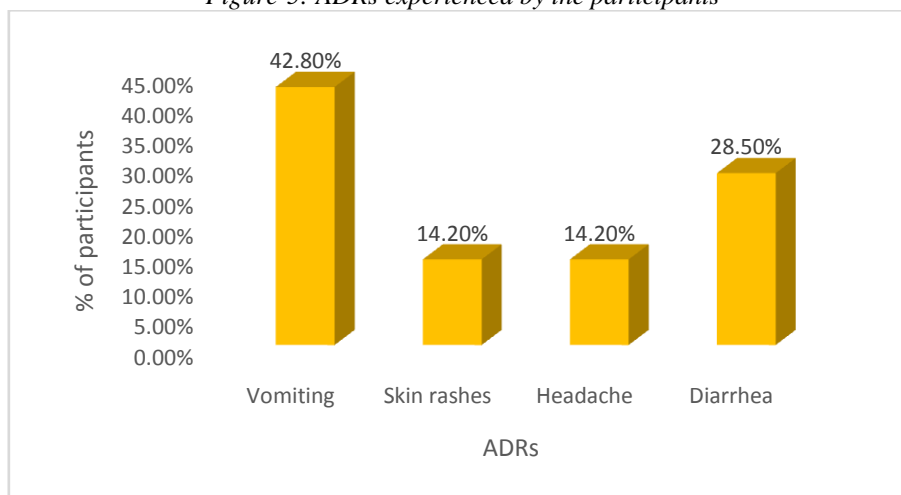
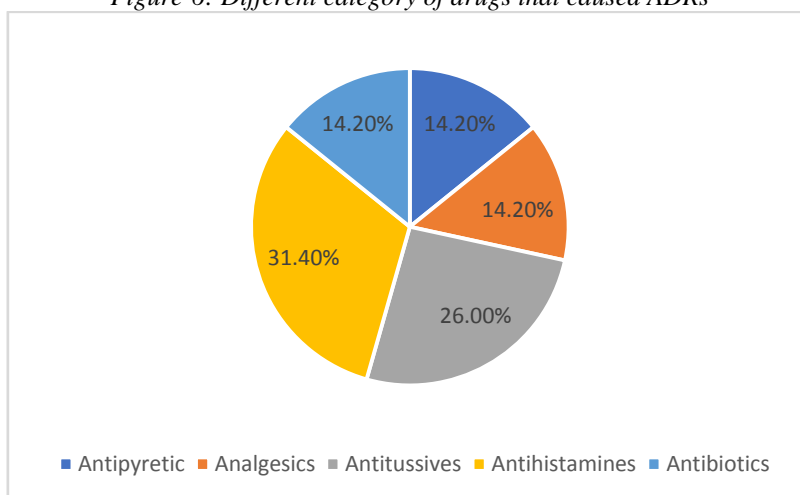


Figure-6: Different category of drugs that caused ADRs



IV. DISCUSSION:

In the current study the prevalence of self medication was found to be 73.36% in an urban setting. And similar results were also found in a study done by Balamurugan et. al., prevalence of self-medication in the coastal regions of South India was found to be 71%. (4) Current study reveals that majority of the participants were using self medication to treat headache, fever, cold and bodyache. Similar results were also found in a study done by According to a study done by Nithin Kumar et al., reveals the indications for self-medication use are headache, fever, flu cold, cough, pain, sore throat, vomiting, diarrhea, mouth ulcers, rashes/allergies(5). Most commonly used drugs are analgesics and antipyretics, antihistamines in the current study. Common findings were observed in a study done by Bhuvana et al, stated that drugs that

are most commonly used were antimicrobials, antifungals, Non-Steroidal Anti-Inflammatory Drugs(NSAIDs), analgesics, antipyretics. (6)

Current study shows that out of 281 who are practising self medication 24.9% were experienced ADRs. Majority of the participants experienced mild ADRs. Vomiting and diarrhea are the most common ADR that occurred. Drugs that caused ADRs were antihistamines, antitussives and antibiotics. Similar results were also found in a study done by Abhinash Panda et al., in his study on self-medication practices revealed the adverse drug reactions caused due to self-medication are gastrointestinal problems, cutaneous adverse drug reactions, and general pruritus and the majority of the adverse drug reactions were caused by NSAIDs, antimicrobials, and anti-hypertensives. (7)

V. CONCLUSION:

current study shows the prevalence of self medication in the urban area of Mysuru was found to be 73.36%. This is due to the reasons like the perception of consulting a healthcare professional being unnecessary in case of minor illness, ease and convenience from self-medication, financial constraints. Majority of the participants are practicing self-medication to treat headache or body ache and the least was to treat skin allergies. Most commonly used drugs are analgesics and antipyretics, antihistamines. 24.9% of self-medication users experienced ADRs. Majority of them were mild. Main drugs caused adverse reactions are antihistamines, antitussives and antibiotics.

VI. RECOMMENDATIONS:

The health education practices regarding the inappropriate use of medicines and their adverse effects to the public has to be increased. And also, proper implementation of Drugs and Cosmetics act to halt the dispensing of antibiotics and other schedule-H drugs to prevent such issues further.

Conflict of Interest: None declared.

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