"Study of self-medication pattern among adults in Tumkur city"

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Abstract

Introduction: Self-medication can be described as obtaining and consuming drugs without the advice of physician. In developing country like India, easy availability of wide range of drugs coupled with inadequate health services results increased use of self-medication compared to prescribed drugs. Present study was conducted to assess the patterns of self-medication in Tumkur.

Material and Methods: A cross sectional study was conducted from august 2014 to December 2014 among the adult population in the field practice area of Sri Siddhartha Medical College. 152 adults were interviewed using a semi-structured questionnaire.

Results: Among 152 households surveyed, prevalence of self-medication was 53.95%. Majority of them got information regarding medications from the previous prescriptions (43.2%). Cough (20.23%) and headache (19.65%) were most common symptoms for which self-medication was practiced.

Conclusion: Present study shows high prevalence of self-medication. Education of both the public and health professionals is required to avoid complications arising from this practice.

Key word: Self- medication, Prevalence, Analgesics

Introduction

Self-medication is defined as the consumption of medicinal products with the purpose of treating diseases or symptoms, or even promoting health, without a prescription provided by a medical professional. WHO defines self-medication as "use of pharmaceutical or medicinal products by the consumer to treat self-recognized disorders or symptoms, the intermittent or continued use of a medication previously prescribed by a physician for chronic or recurring disease or symptom, or the use of medication recommended by lay sources or health workers not entitled to prescribe medicine".[1]

There is a lot of public and professional concern about the irrational use of drugs in self-medication. It is now evident that self-medication is widely practiced in both developing countries as well as developed countries. India is also experiencing this problem of inappropriate use of self-medication in significant numbers.[2]

In developing countries like India, easy availability of wide range of drugs coupled with inadequate health services results in increased proportions of drugs used as self-medication compared to prescribed drugs.[3]

A number of reasons could be enumerated for the rise of self-medication. One of the reasons being the increase in chronic diseases urge of self-care, feeling of sympathy toward family members in sickness, lack of health services, poverty, ignorance, misbelieves, extensive advertisement, use of drugs from informal sectors such as open markets and quacks, illegal purveyors of drugs (non-licensed sellers in the market), etc.[1]

Most commonly available over the counter medications are pain killers, cough and cold remedies, anti-allergy medicines, vitamins and energy tonics. 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.[4]

Studies done on self-reported prevalence study of illnesses that prompted self-medication showed that cough/cold/influenza, digestive disorders, accidental injuries, headache/dizziness, anxiety/insomnia, skin problems, asthma, liver disease, fever, boils were the prevalent health problems.[5]

Inappropriate self-medication results in irrational use of drugs, wastage of resources, increased resistance of pathogens, entails serious health hazards such as adverse reactions and prolonged suffering. If action is not taken, the danger of drug interactions and side effects could increase.[1]

There is currently worldwide concern about the problems of antimicrobial resistance. A number of important bodies such as WHO and the British House of Lords have identified the reasons for the emergence of resistance to antimicrobial agents and the preventive measures which need to be urgently implemented to curb the spread of resistant organisms. The reasons for

the emergence of resistant organisms are not difficult to find.[6]

Dearth of data regarding the incidence of self-medication practice in the Indian population creates difficulty in comparing the extent of self-medication among adult population. Present study was a small endeavor conducted to study the self-medication patterns among the adult population in urban area of Tumkur.

Material and Methods

A Cross Sectional study was conducted in urban field practice area of Sri Siddhartha Medical College from a period of August to December 2014. Permission was taken from the institution to conduct study. Adult population (>20 yrs) were included in the study. History of Self-medication in past one year was considered.

Sample size was calculated by using the formula $n \geq z^2_{1-\alpha/2}/d^2$ by considering 53% prevalence of self-medication and 8.2% absolute error.[3] Total population covered under urban field practice area was 15830 and 1986 house hold were present. Total of 152 households were selected randomly from the list of 1986 households. One adult in each house was selected for the study. After explaining the purpose of the study informed consent was taken. Participant was interviewed by using a semi-structured pretested questionnaire. Questionnaire consisted of general information and 20 questions to assess the pattern of self-medication.

Data was entered in Ms-Excel sheet and analysis was done by using Epi-I nfo 7. Chi-square test was applied to test the significance. Statistical significance was accepted at P<0.05.

Results

Table 1: Sociodemographic factors

Variable	Self-medication		Total
	Yes Number (%)	**No** Number (%)	
Socioeconomic status(modified Kuppuswamy classification)			
I	2(2.86)	7(8.53)	9(5.92)
II	19(27.14)	22(26.83)	52(34.02)
III	17(24.29)	22(26.83)	39(25.66)
IV	28(40.0)	18(21.95)	46(30.36)
V	4(5.7)	2(2.43)	6(3.96)
Gender			
Female	43(28.29)	42(27.63%)	85(55.92%)
Males	39(25.66%)	28 (18.42%)	67(44.08%)
Age			
20-30	29(41.4)	39(47.56)	68(44.74)
31-40	18(25.00)	26(31.7)	44(28.95)
41-50	11(15.7)	11(13.4)	22(14.47)
>50	12(17.14)	6(7.31)	18(11.84)
Education			
Professionals	0	0	0
Graduate or post graduate	25(35.7)	33(40.2)	58(38.15)
Intermediate or post high school diploma	9(12.85)	18(21.9)	27(17.76)
High school certificate `	11(15.71)	13(15.86)	24(15.79)
Middle school certificate	12(17.14)	6(7.31)	18(11.85)
Primary school certificate	5(7.14)	0	5(3.23)
Illiterate	7(10.0)	4(48.79)	11(72.36)

Among 152 households surveyed, prevalence of self-medication was 53.95%. Majority of them got information regarding medications from the previous prescriptions (43.2%) other source of information were from friend (17.05%), drug book (17.05%), media (13.6%) and pharmacy (9.1%). Almost 30.27% practiced self-medication often, 12.5% used always and 11.18% used rarely. Majority of the population (25.66%) who were in the age group 20-30 years practiced self-medication. 50.58% of the females and 58.20% of the males practiced self-medication and there was no significant association between gender and practice of self-medication (p =0.349, X^2 = 0.8758).

Cough (20.23%) and headache (19.65%) were most common symptoms for which self-medication was practiced other common symptoms were fever(17.6%), pain(12.02%), heart burns (7.62%), burns (7.04%), URTI (4.11%), diarrhea (3.81%), Gastro Intestinal upset (3.81%), dyspepsia (3.52%), vomiting (2.35%), sore throat (2.05%). Analgesics (39.34%) was most commonly used drug other commonly used drugs were cough suppressants (18.58%), antacid (16.4%), antibiotic (14.2%), antispasmodic (2.19%), antidiarrhoeal (3.83%), nutritional supplements (5.46%). Majority of them were not aware of the side effects of drugs (68.42%). Reasons for not consulting doctor were minor illness (27.56%), long waiting (31.63%), financial problem (17.35%), distance (8.16%) and others (15.30%). Almost 85.3% checked the expiry date before taking the medicine.

Table 2: Association between the self-medication and knowledge about the drug

Self-medication	Adequate Knowledge about drug		Total
	Present Number (%)	Absent Number (%)	Number (%)
Yes	5(25)	65(53.28)	70(46.05)
No	15(75)	57(46.72)	82(53.95)
Total	20(100)	122(100)	152(100)

$X^2 = 5.4975$ p= 0.01 Significant

Discussion

In developing countries like India, easy availability of a wide range of drugs coupled with inadequate health services result in increased proportions of drugs used as self-medication compared to prescribed drugs. There is always a risk of interaction between active ingredients of hidden preparations of OTC drugs and prescription medicines, as well as increased risk of worsening of existing disease pathology.[7]

Self-medication is widely practiced in both developing and developed countries. The present study indicates that self-medication is widely practiced (53.95%) by the adult population in Tumkur district of Karnataka. A study conducted in coastal area of south India revealed 53% of adult population practiced self-medication. Higher prevalence rate (88.66%) was observed among science students in Karnataka.[3] Almost 73% of housewives in North India practiced self-medication.[1] There was no association between gender and self-medication in the present study were as in Pondicherry more number of females and rural people reported using self-medication.[3]

In the present study Cough (20.23%), Headache (19.65%) and fever (17.6%) were common symptoms for which participants practiced self-medication. In studies conducted in Bahrain.[1] Headache was the most common one (70.9%) followed by cough/common cold, stomach ache and fever. Headache (72.4%) was also the most common morbidity in Karachi.[6] In the study conducted in Ethiopia and Pondicherry fever and headache were the most commonly reported symptoms for self-medication followed by cough and common cold.[3,9]

Analgesics (39.34%) was most commonly used drug other commonly used drugs were cough suppressants (18.58%), antacid (16.4%), antibiotic (14.2%). In the study conducted in Karachi,[6] analgesics were the most common (88.3%) followed by antipyretics and antibiotics; the study in Bahrain[1] also reported analgesics to be the most commonly used drug group (81.3%) with antibiotics contributing only 6% of the total share. Some studies conducted in developing countries have reported a higher use of antimicrobials for self-medication, especially where there is increased incidence of infectious diseases and antibiotics are freely available over the counter.[4,9]

Major source of information was from the previous prescriptions (43.2%) and friend (17.05%), drug book (17.05%). According to Balamurugan et all[3] major source of information was from pharmacist (57.3%) and previous prescription (21.5%). Long wait at clinics (31.63%), mild nature of illness (27.56%) and financial problems (17.35%) were most common reasons for adopting self-medication. The fact that those with a mild illness practiced self-medication has got serious implications as many diseases may initially appear to be mild but misdiagnosis and wrong treatment may invite serious health hazards. This finding is in congruence with the findings of the study conducted in Bahrain where 45.5% preferred self-medication as it is time-saving while 25.4% preferred it due to minor nature of illness.[1] Similarly in study conducted by Kaushal et al[1] felt that going for repeated consultations to doctor put financial restraint on their budget and rest of them felt that they did not have sufficient time to consult the doctor. So, they consulted the physician only when the condition of the patient was serious enough or was not relieved by the self-medication.[1]

Conclusion

Prevalence of self-medication among the adult population was observed to be high. There is need for the authorities to strength existing laws regarding over the counter drugs to ensure their rationale use. Community should be educated regarding appropriate use of drugs and adverse effect of drugs.

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