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Original Research Article

Self-Medication Practices and its determinants among urban dwellers of Dibrugarh town, Assam

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Abstract: Self medication is a major problem in today's health care system, especially in country like India. Pharmacists and pharmacy attendants play an important role in fostering self medication among the public. The serious issues concerned with self medication are wastage of resources, microbial resistance, adverse drug reactions etc. Keeping these facts in mind, this study was conducted to assess the self medication practices and its determinants among urban dwellers of Dibrugarh town. A community based cross-sectional study was carried out in Dibrugarh town. The sample size of 260 was taken purposively. The study area was selected randomly and house to house visit was paid. Among the study population, 73.4% were male. Most (34.6%) were in the age group of > 41 years and 35.7% of the study population had attended High school to higher secondary school. Most (33.4%) of the population were belonged to upper middle class families. Prevalence of self medication was found to be 57.6%. Among them fever (10.7%), skin problems (8.4%), gastritis (6.9%) were found to be most common complaints for which they have purchased medicines. Among the study population 42.3% did not have any complaint at all. Among the type of medicines purchased, 18.7% were antipyretic, 15.3% were antihypertensive, 13.3% were analgesics. Reasons given for self medication includes 25% of study population were found it to be not a serious illness, 24% were not willing to approach Doctors, 13.3% were found it to be convenience. The association between the self medication pattern and age of the respondents ($P<0.05$), religion ($P<0.05$), type of family ($P<0.05$), educational status ($P<0.05$) and occupational status ($P<0.05$) were found to be statistically significant. The study revealed that self-medication is quite prevalent among urban dwellers belonging to middle and lower income group and majority of them were not aware about side effects that can occur if drugs are taken without doctor's advice. So, health education and awareness campaign are necessary to avoid complications arising from this faulty practice.
Keywords: self-medication, pattern, urban dwellers, pharmacy, adverse drug reactions.

INTRODUCTION

Self medication is defined as the use of medication by a Patient on his own initiative or on the advice of a Pharmacist or a lay person instead of consulting a medical practitioner [1]. Self medication with drugs is an economical choice of treatment for common self limiting illnesses. It helps in treating and preventing ailments that do not require medical consultation and reduce the pressure on medical services for the relief of minor ailments Some authors revealed that self-medication can be practiced and they consider it appropriate for short-term relief of symptoms where accurate diagnosis unnecessary, uncomplicated cases of some chronic and recurrent disease [2]. However, people should be properly educated about the practice of self-medication in order to prevent the harmful effects caused by the practice. The increasing self-medication will require more and better education of both the public and health professionals to avoid the complications arising from this practice [3-4].

Pharmacists and pharmacy attendants play an important role in fostering self medication among the public. Although, over the counter drugs are meant for self medication and are of proved efficacy and safety, their improper use due to lack of knowledge of correct dose, side effects and interactions could have serious implications, especially in extremes of age (children and old age) and special physiological conditions like pregnancy and lactation. Combination preparations containing 'hidden' classes of drugs and food supplements or tonics of doubtful value were commonly used in India.

In a study it was seen that 87% of the chest chronic diseases and their incidence has raised from 30% - 80% in the last 40 years. Other reasons which are responsible for self-medication in developing countries are urge of self-care, feeling of sympathy toward family members in sickness, lack of health services, poverty, ignorance, false beliefs, 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 [5-6].

Self medication is a major problem in today's health care system, especially in developing countries like India. The serious issues concerned with self medication are wastage of resources, microbial resistance, adverse drug reactions and drug-drug interactions. The World Health Organization has emphasized that self medication must be correctly taught and controlled [7].

There has not yet been any systematic research conducted to assess the prevalence of self-medication in the community. Thus self-medication in modern pharmaceuticals seems to be a field in which information is scarce [8]. To the best of our knowledge there is no research conducted to reveal the extent of this problem in Assam. Therefore we believe that this research may show the magnitude of problem in Assam so as to initiate intervention by the concerned authorities and the community as well.

Keeping these facts in mind, this study was conducted in an urban area of Dibrugarh town with following objective -

- To assess the prevalence of self-medication practices and its determinants among urban dwellers of Dibrugarh town, Assam.

METHODOLOGY

A community based cross- sectional study was carried out in a residential area of Dibrugarh town from May to July 2014. The study area Dibrugarh town, which is the head quarter of the district, is located in the southern bank of the river Brahmaputra. 'Dibrugarh' derives its name from 'Dibarumukh' which means mouth of 'Dibaru' or 'Dibru' (Bodo word meaning 'a blister'). Whole of Dibrugarh town is surrounded by tea gardens.

As per data from census 2011[9], total population of Dibrugarh district is 13,26,335 and Dibrugarh town has a population of 1,38,661. The study area Milan Nagar is one of the main residential area which is situated southern part of the city. It has 470 numbers of household with approximately 2000 population.

Inclusion criteria

- Respondents residing in the urban area for more than 6 months
- Only one respondent from each household is included in our study
- Who gave informed consent to be part of our study

Exclusion criteria

- Respondents who gave partial/ incomplete information
- Those who did not give consent

Purposive sampling method was used and total 260 study population were enrolled for the study. The study area was randomly selected from the list of urban wards of Dibrugarh and so Milan Nagar, one of the residential areas which are situated in southern part of the town was taken. The data for our study has been collected by house to house visit. Inform consent was taken before the conduct of the study. They were briefed about the objective, purpose and nature of the study as well as contents of the proforma in local language and active help and cooperation were sought from them. In the selected area every consecutive house was visited from one end and one member was allowed to participate from each house. First house was randomly selected then every consecutive house was visited. If any house was found locked or not willing to answer, adjacent house was taken as replacement. Data were collected by using a pre-design semi structured proforma and by interviewing the member of the selected houses. Total 260 household were visited, those responses found partial/ incomplete were not included in the study. Modified BG Prasad Classification 2016 was used to calculate the socio-economic status. Permission to conduct the study was obtained from the Institutional Ethics Committee, Assam Medical College, Assam.

Data were analyzed and presented in suitable tables; chi-square test was applied to test statistical significance where ever necessary. Data were collected and entered in Microsoft Office Excel and analyzed by using SPSS- Version 18.

Criteria of significance used in the study were $p< 0.05$.

RESULTS

As shown in Table No. 1, Total 260 participants were included in the study, out of which 73.4% were male and 26.6% were female. Most (34.6%) were in the age group of > 41 years followed by 31.1% were in the age group of 18 - 29 years and 27% were in the age group of 30-41 years. Majority (79.2%) of the population belonged to Hindu religion and 72.6% of population belonged to Nuclear families.

Most (35.7%) of the study population had attended High school to higher secondary level followed by 30.7% had attended primary to Middle school and 23.8% were graduate . Most (25%) of the population were service holders followed by 23.4% were businessmen, 20.7% were daily wise earners and 19.2% were housewives. Most (33.4%) of the population were belonged to upper middle class families followed by 19.6% were belonged to poor families and 17.3% were belonged to high families.

Table-1: Sociodemographic profile of study population

Sociodemographic profile	**(N=260) (%)**
Age	
< 18	19 (7.3%)
18 – 29	81 (31.1%)
30 – 41	70 (27%)
>41	90 (34.6%)
Sex	
Male	191 (73.4%)
Female	69 (26.6%)
Religion	
Hindu	206 (79.2%)
Muslim	40(15.3%)
Others	14 (5.3%)
Type of Family	
Nuclear	189 (72.6%)
Joint	71 (27.4%)
Educational status	
Illiterate	25 (9.6%)
Primary - Middle	80 (30.7%)
High school – Higher secondary	93 (35.7%)
Graduate	62 (23.8%)
Occupational Status	
Daily wise earners	54 (20.7%)
House wives	50 (19.2%)
Service holders	65 (25%)
Business	61 (23.4%)
Shop-keepers	30 (11.5%)
Socioeconomic status (Per capita income in Rs.)	
Upper high (>=6186)	20 (7.6%)
High (3093-6185)	45 (17.3%)
Upper middle (1856-3092)	87 (33.4%)
Lower middle (928-1855)	57 (22%)
Poor (<927)	51 (19.6%)

As shown in Table No. 2, prevalence of self medication was found to be 57.6%. Among them fever (10.7%), skin problems (8.4%), gastritis (6.9%), Diabetes mellitus (6.5%) cough & cold (5.7%) were found to be most common complaints for which they have purchased medicine. Among the study population 42.3% did not have any complaint at all.

Table-2: Distribution of study population according to their Complaints

Complaints	Number (%)
Fever	28 (10.7%)
Cough/Cold	15 (5.7%)
Headache	13 (5%)
Gastritis	18 (6.9%)
Hypertension	23 (5%)
Diabetes Mellitus	17 (6.5%)
Diarrhoea/Dysentery	9 (3.4%)
Indigestion	2 (0.7%)
Pain abdomen	3 (1.1%)
Skin problems	22 (8.4%)
No complain	110(42.3%)
Total	260 (100%)

As shown in Table No. 3, among the type of medicines purchased, 18.7% were antipyretic, 15.3% were antihypertensive, 13.3% were analgesics, 13.3% were insulin, 12.7% were antacids/PPI and 9.3% were topical application and 8% were antibiotics.

Table-3: Distribution of study population according to the type of medicines purchased

Type of Medicines	Number (%)
Analgesic	20 (13.3%)
Antipyretic	28 (18.7%)
Antibiotic	12 (8%)
Antitussive	7(4.7%)
Insulin/OHA	20(13.3%)
Vitamin/Mineral	3 (2%)
Antihypertensive	23 (15.3%)
Antihistaminic	4 (2.7%)
Antacids/PPI	19 (12.7%)
Topical application	14 (9.3%)
Total	150 (100%)

As shown in Table No. 4, reasons given for self medication includes 25.3% of study population were found it to be not a serious illness, 24% were not willing to approach Doctors, 13.3% were found it to be convenience, 11.3% of population did have time to consult Doctors, 10.7% were found it to be cost effective, 10.7% were found it confidence in self medication and 4.7% were due to financial problem.

Table-4: Reasons given for Self Medication

Reasons given for self-medication	Number (%)
Cost effective	16 (10.7%)
Convenience	20 (13.3%)
Confidence in self medication	16 (10.7%)
Not a very serious illness	38 (25.3%)
Lack of time	17 (11.3%)
Financial constraints	7 (4.7%)
Not willing to approach Doctor	36 (24%)
Total	150 (100)

As shown in Table No. 5, the association between the self medication practice and age of the respondents ($P<0.05$), religion ($P<0.05$), type of family ($P<0.05$), educational status ($P<0.05$) and occupational status ($P<0.05$) were fund to be statistically significant whereas, sex ($P=0.2$) were not found to be statistically significant.

Out of 150 study population who purchased medicines 23% were cured by the medicines taken by them and rest were not cured, out of which 30.8% of the subjects did not do anything while 15.4% changed medicine by self and 53.8% consulted a doctor. It was also revealed that 80% of the subjects did not have any adverse reactions. The most common reason for self

medication seemed that majority of the respondents did not consider the illness to be a serious one.

Table- 5: Socio-demographic factors associated with self medication practices

Socio-demographic Factors	Numbers (%)	P value
Age (N)		
<18 (19)	10 (52.6%)	
18 – 29 (81)	34 (42%)	0.003 DF=3
30 – 41(70)	44 (62.8%0	
>41(90)	62 (68.8%)	
Sex		
Male (191)	111(58%)	0.2 DF=1
Female (61)	39 (63%)	
Religion		
Hindu (206)	138 (67%)	0.001 DF=2
Muslim (40)	15 (37.5%)	
Others (14)	07 (50%)	
Type of Family		0.04 DF=1
Nuclear (189)	116 (61.3%)	
Joint (71)	34 (47.8%)	
Educational status		
Illiterate (25)	15 (60%)	
Primary – Middle (80)	62(77.5%)	<0.0001 DF=3
High school – Higher secondary (93)	51(54.8%)	
Graduate (62)	22 (35.4%)	
Occupational status		
Daily waise earners (54)	34 (63%)	
Housewives (50)	31 (62%)	0.05 DF=4
Service holders (65)	27 (41.5%)	
Business (61)	39 (64%)	
Shop-keepers (30)	19 (63.3%)	

DISCUSSION

The study was conducted on self medication pattern among urban dwellers of Dibrugarh district, Assam .Out of 260 study population, 73.4% were male and 26.6% were female. Most (34.6%) were in the age group of > 41 years and majority (79.2%) of the population belonged to Hindu religion and 72.6% of population belonged to Nuclear families. Most (35.7%) of the study population had attended High school to higher secondary. Most (25%) of the population were service holders followed by 23.4% were businessmen, 20.7% were daily wise earners and 19.2% were housewives. Most (33.4%) of the population were belonged to upper middle class families followed by 19.6% were belonged to poor families and 17.3% were belonged to high families.

The prevalence of self medication in the present study was found to be 57.6% compared to that of 27.6% in a study done in Jimma Town [10] 30% in a study done in Mexico [11] and 73% in a study done in Haryana, India [12] and 97% in a study conducted in Hong Kong [13] and which is very much lower (80% prevalence) to a previous study of World Health Organization; Drug Action Programme, 1998 [14].

According to the study conducted in Mekelle University, the types, extent and reason for self medication can vary from country to country which might be due to study methodologies utilized and also the different socio economic and socio demographic factors [15].

In our study we have found the most frequent complaint to be fever followed by skin problems, gastritis while pain is the most frequent complaint of study conducted in the Danish Community Pharmacies and German Community [16]. The commonest conditions that led to self-medication in the study done by worku, *et al*. were headache, fever, cough, and diarrhoea [17]. In a similar study in Hong Kong the reasons for self-medication included the conditions like musculoskeletal pain, minor burns or bruises, gastrointestinal upset, headache, sore throat, skin problems, cough, and dyspepsia [18].

The most commonly used medication in this study was found to be antipyretics, analgesics, anti-hypertensive, antacids/PPI and topical applications compared to a similar study done in Haryana found that

analgesics, antibiotics, cough syrup and nutritional supplements [19].

In our study we have found that 25.3% of the study population did not find it to be a serious problems followed by (24%) did not willing to have consult to the Doctors, 11.3% did not have sufficient time to consult the Doctors and 4.7% have found it due to financial constraints. In a similar study done in Haryana[19] found that 71% of the subjects practiced self medication because they 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 doctors.

In a study among urban slum dwellers in South Indian city, Hyderabad [20] prevalence of self medication was found to be 86% (140/162) whereas 10% (16/162) were consulted Doctor/physician first. Among them 32% of population thought that illness not to be a serious problem, 16% of population made excuse having lack of time. Whereas in our study we revealed prevalence of self medication was 57.6%, 25.3% of study population were found it to be not a serious illness, 24% were not willing to approach Doctors, 13.3% were found it to be convenience, 11.3% of population did have time to consult Doctors, 10.7% were found it to be cost effective, 10.7% were found it confidence in self medication and 4.7% were due to financial problem.

In our study we have seen that 57.6% of the people preferred self-medication. We infer that respondents with lower education prefer self medication than those with higher education. This is probably because lower education results in ignorance and also, causes lower socioeconomic status, resulting in financial problems. On the other hand, educated people seemed comparatively more aware of the possible hazards of self-medication.

CONCLUSION

The self medication practice among the urban dwellers is very high. There is a need for raise awareness regarding danger and consequences of self medication practice among the general people and also need to strict implementation of legislation regarding sale of medicine.

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Declaration

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Conflict of interest – none.

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