

Self-medication- A challenge in the present scenario: Experience from an urban slum of Darjeeling district, West Bengal

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Abstract

Background: Self-medication is an important concern for health authorities at global level. There is much public and professional concern regarding self-medication practices, which has increased in the last few decades, especially in the developing countries. **Objectives:** To determine prevalence of self-medication practice and factors associated with self-medication, attitude & perception of people towards self-medication. **Methods:** A cross sectional study was conducted in urban field practice area of a tertiary care teaching institute of North Eastern India. 190 subjects were selected through complete enumeration technique during a period of six months. Participants were interviewed using predesigned, pretested and validated self-administered questionnaire. Information regarding self-medication use in the past three months & associated socio-demographic factors, purpose, source of drug procurement, perception regarding self-medication use were collected. Relationship between variables were determined by multiple logistic regression analysis. **Results:** Self-medication was found in 94.2% of the study participants. Fever with cough & cold followed by gastritis & bodyache were the common illness where self-medication was being used. NSAIDs (62.6%), PPI (57.8%), Amoxicillin-Clavulanic Acid (66.7%), cough syrups (46.9%) and anti-histaminic (31.2%) were found among the commonly self-medicated medicines. Commonest method adopted to obtain drugs was compelling symptoms (47.9%). Saving time (82.4%) was noted as most common reason for self-medication. Males, people above poverty level & distance of their households to nearest health facility < 3 km were significantly associated with self-medication. **Conclusion:** Enforcement of rules determining drug prescription and dispensing, health education of people & regulation may help in limiting self-medication practices.

Keywords: Self-Medication, Urban Slum

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Introduction

Self-medication is an important concern for health authorities at global level. There is much public and professional concern regarding self-medication practices, which has dramatically increased in last few decades, especially in the developing countries. Studies have reported wide variations in its prevalence in India increasing from 31% in 1997 to 71% in 2011[1]. The nature and extent of self-medication varies according to cultural, social, and educational influences. World Health Organization has defined 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[2].

Self-medication is associated with risks such as misdiagnosis, use of excessive drug dosage, prolonged duration of use, wastage of resources and increased resistance to pathogens[3]. Self-medication in modern pharmaceuticals seems to be a field in which information is scarce and only a very little information has been available about self-medication and its major determinants, especially in developing countries[2]. The present study was carried out to assess the prevalence of self-medication practices in an urban slum in Siliguri Sub-division and factors associated with self-medication, attitude &

perception of people towards self-medication.

Materials & Methods

A community-based cross-sectional study was conducted in the urban field practice area of department of community medicine, NBMCH, West Bengal, which caters a population of 119040 (as per the records available with district authority), for a period of six months (from July 2019- December 2019). Persons aged above 18 years and willing to participate were selected for the study excluding severely ill subjects. Sample size was calculated based on prevalence of self-medication 11.9% as shown in a previous study done at Urban Puducherry[4], India using the formula $n = (Z^2pq)/l^2$ where $Z = 1.96$, $l =$ absolute precision of 5% and q was the complement of p . The sample size was found to be 168, taking a non-response rate of around 10%, the final sample size became 185.

The urban field practice area under Community Medicine dept of NBMCH consists of 37 wards. Among them Durgadas colony was selected by simple random sampling which was comprised of 207 households and researchers visited all those households. From each household single respondent was randomly selected fulfilling the inclusion/exclusion criteria and was interviewed. Data of 17 subjects were incomplete, so finally the researchers could analyse data of 190 participants.

After getting approval from the institutional Ethics Committee data was collected by interview of the participants by using pretested, predesigned, semi-structured questionnaire which was administered to the members of the household at the time of the visit. The questionnaire was assessed for face and content validity by experts in the department of Community Medicine, NBMCH. Prior informed consent was obtained from the study subjects and their anonymity and

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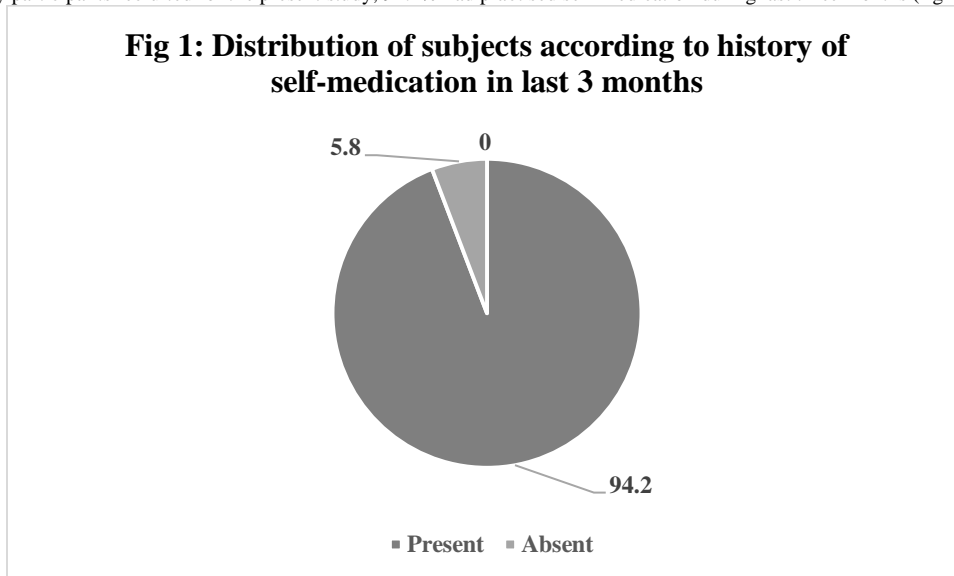
confidentiality was maintained. Data related to practice of self-medication & reasons for self-medication with associated factors like socio-demographic details (age, gender, education, occupation, income etc.) were collected. Respondents who reported self-medication were further probed regarding their attitude & perception towards self-medication.

Self-medication practice was defined as- consumption of any drug for self-treatment, without prior consultation with a certified doctor with a minimum MBBS degree.

Collected data were entered and codified in Micro soft Excel Spread Sheet. Calculation was done with the help of MS excel and statistical software SPSS 22.0 version. Descriptive statistics like proportion of baseline characteristics was used for describing data. Relationship between self-medication practice and other variables were determined in multivariate analyses using logistic regression test with 95% confidence interval (CI) and p value ≤ 0.05 was considered significant.

Results

Out of 190 study participants recruited for the present study, 94.2% had practised self-medication during last three months (fig 1).



Around 90% of the study participants preferred allopathic medication (table 1).

Table 1: Distribution of the study participants according to their self-medication history (n=179) (*multiple responses present for some variables)

Factors while considering drug for self-medication	Frequency (%)
Price	76 (42.4)
Pharmaceutical company	103 (57.6)
Source of self-medicated drugs*	
Local Pharmacy shop	159 (88.8)
Online	59 (32.9)
Preference of drugs taken	
Allopathic	169 (94.4)
Others **	10 (5.6)
Prior checking of the self-medicated drugs	
Present	64 (35.7)
Absent	115 (64.3)

**Others include homeopathic & other ayurvedic drugs

Participants mainly used self-medications specially for fever with cough & cold, followed by gastritis & body ache. Non-steroidal anti-inflammatory drugs (NSAIDs)(62.6%)&proton pump inhibitors (PPI) (57.8%) were found among the commonly self-medicated drugs by the participants (table 2).

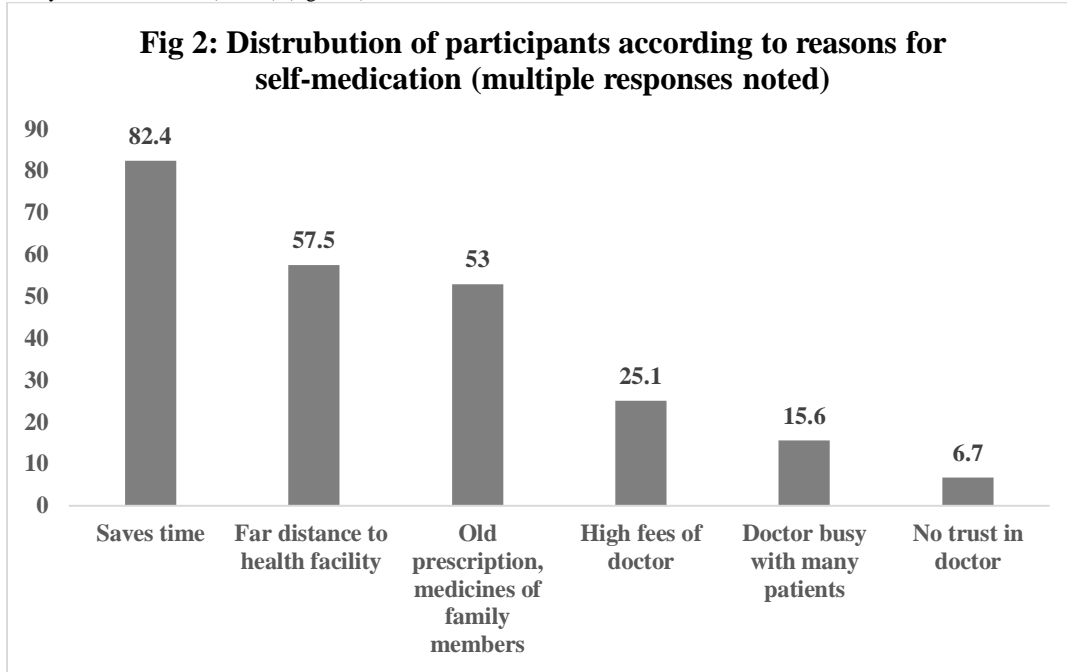
Table 2: Distribution of the study participants according to types of drugs used during self-medication (n=179) (*Multiple response present)

Name of the drugs	Frequency (%)
Non-steroidal anti-inflammatory drug (NSAID)	111 (62.6)
Cough syrup	84 (46.9)
Anti-histaminic	56 (31.2)
Anti-emetic	27 (15)
Protein Pump Inhibitor	103 (57.8)
Deriphyllin, respules for nebulization	7 (3.9)
Calcium	22 (12.2)
Multivitamins	28 (15.6)
Oral Rehydration Salt (ORS)	12 (6.7)

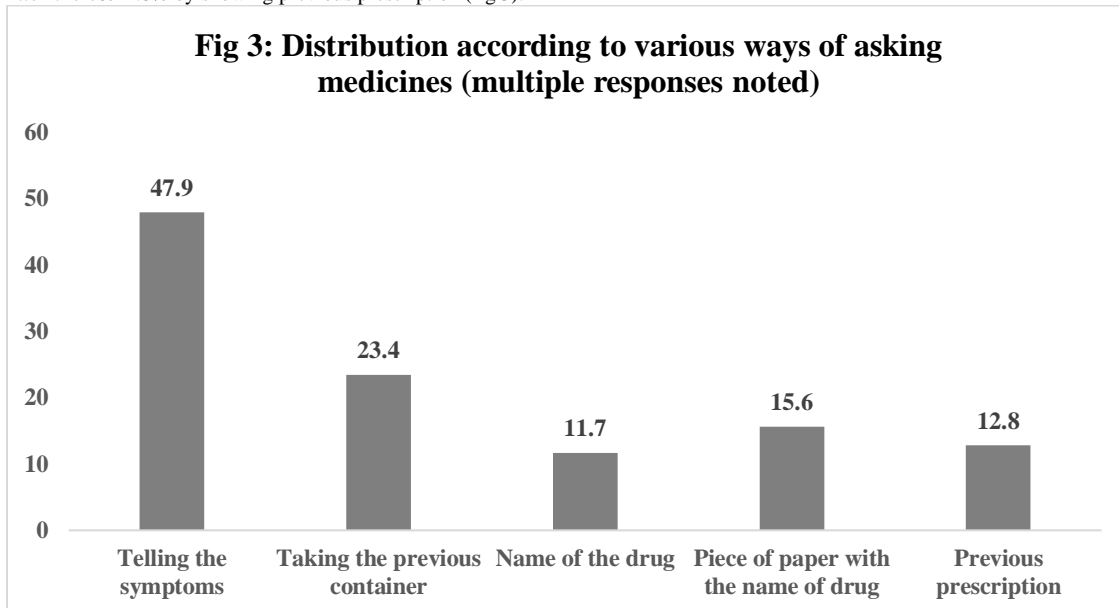
Azithromycin	89 (49.7)
Amoxycillin & Clavulanic Acid	119 (66.7)
Ofloxacin & Ornidazole	16 (8.9)

Strikingly antibiotics were also reported to be used for self-medication; most common antibiotic being used was Amoxycillin & Clavulanic Acid (66.7%) followed by Azithromycin (49.7%) (table 2).

The reasons for self-medication as identified were mainly it saves time (one doesn't have to wait in long queue) (82.4%), followed by far distance of health facility from their house (57.5%) (figure 2).



During further analysis for exploring the various ways of asking medicines it was noted that, 47.9% of the study participants obtained the drugs by telling the symptoms, 23.4% of the participants got it by taking the previous container, 15.6% by showing piece of paper with the name of drug written there & 12.8% by showing previous prescription (fig 3).



Luckily, a large group of the participants (86.8%) did not suffer from any adverse effect following self-medication. Around 82.1% of the study participants had a habit of discontinuing the drug as the symptoms disappeared.

Findings of multivariate logistic regression analysis (table 3) had revealed that, there was statistically significant higher proportion of self-medication among male persons (97.9%), belonging to APL families (98.2%) and whose place of residence was within 3 kms from the nearby health facility (97.8%). There was almost similar

proportion (slightly high in between 21-40 years) of self-medication in different age groups and this finding was statistically insignificant.

Table 3: Association of self-medication practice with some relevant socio demographic parameters of the study participants (n=190)

Parameters	Practising self-medication		Total (%)	Statistical test AOR (95% CI)
	Yes (%)	No (%)		
Age group (years)				
< 20	11 (91.7)	1 (8.3)	12 (100)	1 (Referent)
20-40	120 (94.5)	7 (5.5)	127 (100)	0.999 (0.237- 7.995)
>40	48 (94.1)	3 (5.9)	51 (100)	0.889 (0.156-4.995)
Gender				
Female	38 (82.6)	8 (17.4)	46 (100)	1 (Referent)
Male	141 (97.9)	3 (2.1)	144 (100)	0.004* (2.462-114.59)
Socio-economic status				
BPL	16 (66.7)	8 (33.3)	24 (100)	1 (Referent)
APL	163 (98.2)	3 (1.8)	166 (100)	0.000* (0.004-0.162)
Distance to the nearest health facility				
≥ 3 km	48 (85.7)	8 (14.3)	56 (100)	1 (Referent)
≤ 3 km	131 (97.8)	3 (2.2)	147(100)	0.042* (0.038-0.984)
Total	179 (94.2)	11 (5.8)	190 (100)	

Discussion

Findings of the present study revealed that, self-medication among 94.2% of the study participants in the preceding 3 months which is alarmingly high. Though prevalence of self-medication cannot be compared across different studies due to their varying nature of definitions used, recall period considered for definition, region selected & methodology adopted, but almost similar finding was observed in a study done at Mangalore among the self-medication habits in medical student, where self-medication was reported among 92% [4].

Very few studies were conducted in this part of the country. A study conducted in urban Puducherry had shown prevalence of self-medication only in 11.9% of the study participants in preceding 3 months [5]. Similar type of studies done among different group of people in various places had shown prevalence of self-medication from 31.3% to 78.6% [6-8]. A recent study conducted in rural area of Uttar Pradesh [9] had showed, prevalence of self-medication among 50% of the subjects. A study in Nepal found that 59% of the respondents had taken some form of self-medication in the 6-month period preceding the study [10].

In the present study, fever with cough & cold, body ache & gastritis were the most common conditions for which people had used self-medication. Interestingly, 82.1% of them had the habit of discontinuing the drug after 2-3 days as the symptoms were cured. NSAIDs (62.6%), PPI (57.8%), Amoxicillin & Clavulanic Acid (66.7%), cough syrups (46.9%) and anti-histaminic (31.2%) were found among the commonly self-medicated medicines. Similar findings were reported by Ahmed A et al [8] in Northern India, where also NSAIDs, PPI comprises of most commonly used self-medicated drugs. However, most of these studies had taken into account all type of drugs including homeopathy or other Indian system-related drugs.

This study also denotes that, there was a little bit high prevalence of self-medication among the age group 21-40 years (94.5%) & among males (97.9%). This could be due to the neglecting attitude of mild illness by males & avoid spending time in hospitals and also risk-taking behaviour of middle age group persons. Also, it was observed that there was statistically significant higher prevalence of self-medication among the persons belonging to above poverty line (APL) (98.2%) according to Tendulkar committee's criteria [11] and whose residence was within 3 km distance from the nearby health facility (97.8%). It is obvious that better financial status and lesser distance of households from health facilities cannot improve the habit of self-medication.

Limitations of the study

The study was conducted in a limited area of Darjeeling district, so the result couldn't be extrapolated on the whole population of the district located at West Bengal. It could have been better if the

researcher could follow up them, but due to COVID restriction it was not possible at that time. During the interview, the participants had to recall few things to answer some questions, so recall bias might have happened.

Conclusion

Self-medication was an important health issue in the studied area. Respondents mainly prefer self-medication to save time without having proper knowledge about consequences in near future. Enforcement of rules determining drug prescription and dispensing, health education of the people & regulation may help in limiting the self-medication practices. More studies with larger sample size from this area might be helpful in formulating strategies on this issue.

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