Research Article

A cross-sectional study on self-medication practices among the rural population of Meghalaya

Apurba Marak, Madhur Borah, Himashree Bhattacharyya, Kaushik Talukdar

Department of Community Medicine, North Eastern Indira Gandhi Regional Institute of Health and Medical Sciences, Shillong, Meghalaya, India.
Correspondence to: Madhur Borah, E-mail: borahmadhur8@gmail.com

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Abstract

Background: Self-medication can be described as a double-edged sword for its users, because it has both beneficial and harmful effects. The practice of self-medication is influenced by various factors. Meghalaya being an antimalarial drug resistant region is very much vulnerable to harms of self-medication.

Objective: Therefore, this study was initiated to determine the prevalence of self-medication for allopathic drugs among the rural population and to find out the association between certain socio-demographic characteristics and self-medication.

Materials and Methods: The study was a community-based, cross-sectional study carried out at Sohiong area of Mawphlang Block, East Khasi Hills district, Meghalaya, India. A total of 400 respondents of 18 years of age or more were randomly selected for the study.

Result: Prevalence of self-medication was found to be 55% for allopathic drugs. Higher percentages of self-medication practices were seen among male gender (54.7%), people educated at least up to high school (64%), and in the younger age group (55%). Mild illness (30%) was the most common reason for self-medication followed by unwillingness to go to doctors (27%). Cough and common cold (28.3%) were found to be the most common symptoms for self-medication. Most common source of information for self-medication was family members and friends (38.7%).

Conclusion: Higher percentages of self-medication practices were seen among the males, higher educational and socio-economic status, and younger age group. Health education to people regarding responsible self-medication is necessary to prevent misuse and adverse effect of self-medication.

KEYWORDS: Self-medication, rural population, cross sectional study, socioeconomic status, allopathic drugs, health education

Introduction

Self-medication is an important aspect in health-care delivery system especially in a developing country like India. Making the individuals responsible for their own health through health education and make them aware that professional care for minor ailments is not necessary are the keys that lead to this relatively newer concept.[1] In 1978, the Declaration of Alma-Ata recognized people's involvement in achieving the optimum health. Also Ottawa declaration of health promotion in 1986 emphasized the central role of individuals and communities in contributing to health.[2] Self-medication is a tool in this approach. The World Health Organization (WHO) has defined self-medication as the practice whereby individuals treat their ailments and conditions with medicines that are approved and available without prescription, and which are safe and effective when used as directed.[3] The WHO promotes the practice of responsible self-medication so that patients can get desired benefits without overburdening the health-care delivery system especially in rural and remote areas.[4] But self-medication can be described as a double-edged sword for its users, because it has both beneficial and harmful effects. Self-medication has

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advantages like it facilitates better use of clinical skills, increases access to medication to the needy, and also to better utilization of funding in public health program.[5] Major problems related to self-medication are increased resistance of pathogens and serious health hazards such as adverse reaction and prolonged suffering. Self-medication is also related to antibiotic resistance. The countries those reported high levels of antibiotic resistance also reported high prevalence of self-medication with antibiotics.[6] In India self-medication is one of the important factors attributed to development of antimicrobial resistance.[7]

The use of self-medication is highly prevalent in India. Various community-based studies had found the prevalence of self-medication in India from 12% to as high as 73%.[8,9] The practice of self-medication is influenced by factors such as socioeconomic status of patients, level of education, cultural practices in the community, and various other factors.[10] Hence to address the disadvantages of self-medication and to increase the knowledge of people about responsible self-medication, we need to have a clear picture of the factors influencing self-medication. Meghalaya being one of the corner most state of India still lacks a good public health infrastructure on the ground and being a antimalarial drug resistant region is very much vulnerable to harms of self-medication.[11] But there are very few studies regarding self-medication in this region especially in rural areas. Therefore this study was initiated with the following objectives in mind. To determine the prevalence of self-medication for allopathic drugs among the rural population and to find out the association between certain socio-demographic characteristics and self-medication.

Materials and Methods

The study was a community-based, cross-sectional study carried out at Sohiong area of Mawphlang Community Developmental Block, East Khasi Hills district, Meghalaya. It is about 25 km from state capital Shillong and is also the rural health practice area of the medical college. The area is inhabited by tribal population of mostly lower socioeconomic background. Sohiong had about 700 households and held a population of about 30,528 (census 2011). For our study, we randomly selected a total of 400 households and from each household we selected one person of 18 years or more of age who had given written consent to be part of the study.

Sampling

Considering the prevalence of self-medication practices of 50%[12] and relative precision of 10%, the calculated sample size was 400 ($N = 4pq/E^2$). Informed consent was taken from each and every individual and face-to-face interview was carried out by means of predesigned semi-structured interview schedule. Study period was from October to December 2014. Data were expressed by frequencies, proportions, and percentages. Chi-square test was done to find association between the variables. Analysis was carried out using SPSS 14 (SPSS Inc. Chicago, IL, USA).

Operational Definition

Self-Medication

It was defined as the practice whereby individuals treat their ailments and conditions with allopathic medicines without consulting any health-care providers, which included registered medical practitioners (MBBS or AYUSH), registered pharmacist, ANM, and GNM. In our study, we only considered self-medication related to allopathic drugs.

Recall period of last 6 months was taken for the study. BG Prasad classification was used to measure socioeconomic status in rural areas.[13]

Inclusion Criteria

Respondents of more than 18 years of age and who were permanent residents of the village and who gave informed consent to be part of the study.

Exclusion Criteria

Person who was not a permanent resident of the village and who did not give informed consent to be part of the study.

Ethical Issues

1. Informed consent from every individual concerned was obtained.
2. Ethical clearance obtained from the Institute.
3. Data so collected were handled with strict confidentiality.

Results

Our study conducted in rural areas of East Khasi Hill District of Meghalaya had a total of 400 respondents. Out of those, 150 respondents (37.5%) were male and 250 (62.5%) were female. Among them, 259 respondents (64.8%) were in the age group of 18–36 years while 127 respondents (31.7%) were in the age group of 36–55 years. Only 14 respondents were more than 55 years of age. Sixty-seven respondents (16.7%) were illiterate while 162 (40.5%) were educated up to primary or middle schools level. Only 44 (11%) respondents were HS passed or more. Out of 400 respondents, 189 (47.3%) were of lower middle socioeconomic class and 92 (23%) were of upper lower socioeconomic class.

In our study we found that out of 400 respondents, 220 (55%) had practices of self-medication for allopathic drugs during the last 6 months. Practice of self-medication was found [Table 1] to be slightly more among the males (54.7%) than the females (47.2%). High percentage of self-medication practices seen in the age group of 18–35 years. Among them, 55% had practices of self-medication. Our study found that practice of self-medication was more among the persons (64%) who were educated at least up to high school. Self-medication practices were seen to be more among the respondents belonging to upper middle (71.1%) socioeconomic class. While chi-square test revealed that [Table 1] practice of self-medication was not significantly associated with gender ($p = 0.917$), age of the respondent ($p = 0.68$),

Table 1: Demographic characteristics and practice self-medication

Character	Total (%)	Practicing self-medication, *μ* (%)	Not practicing self-medication, *μ* (%)	*P*
Sex				
Male	150 (37.5)	82 (54.7)	68 (45.3)	0.917
Female	250 (62.5)	118 (47.2)	132 (52.8)	Not significant
Age				
18–35	259 (64.8)	144 (55.6)	115 (44.4)	0.682
36–55	127 (31.7)	65 (51.2)	62 (48.8)	Not significant
56–75	10 (2.5)	7 (70.0)	3 (30.0)	
>75	4 (1.0)	0 (0.0)	4 (100)	
Education				
Illiterate	67 (16.8)	34 (50.7)	33 (49.3)	0.18
Primary/middle school	162 (40.5)	89 (55)	73 (45)	Not significant
High school/HSSC passed	127 (31.7)	82 (64.6)	45 (35.4)	
Higher Secondary passed and above	44 (11)	28 (63.6)	16 (36.4)	
Socioeconomic status (BG Prasad's classification)				
Upper class (class I)	10 (2.5)	3 (30)	7 (70)	0.64
Upper middle (class II)	45 (11.2)	32 (71.1)	13 (28.9)	Not significant
Lower middle (class III)	189 (47.3)	102 (54)	87 (46)	
Upper lower (class IV)	92 (23)	52 (56.5)	40 (43.5)	
Lower class (class V)	64 (16)	37 (57.8)	27 (42.2)	

Table 2: Reasons for practicing self-medication

Reasons	Numbers	Percentage
Mild illness	120	30
Not wanting to go to doctors	108	27
Emergency use	90	22.5
Previous experience	62	15.5
Monetary constrains to go to hospital	20	5

Table 3: Most common symptoms for practicing self-medication

Symptom	Numbers	Percentage
Fever	70	17.5
Pain abdomen	71	17.8
Headache	69	17.2
Body pain	55	13.7
Cough and common cold	113	28.3
Others	22	5.5

Table 4: Source of information of drugs for self-medication

Sources	Number	Percentage
Previous prescription	86	21.5
Local chemist	117	29.3
Family member and friends	155	38.7
Electronic and print media	42	10.5

educational status (p = 0.18), and socioeconomic status (p = 0.64).

The study observed that [Table 2] respondent's perception of mild illness (30%) was the most common reason for self-medication followed by not willingness to go to doctors (27%). Medical emergency (22.5%), previous experience (15.5%), and economic reasons (5%) were the other reasons for self-medication practices observed in the study. Cough and common cold (28.3%) were found to be the most common symptoms for self-medication [Table 3]. Fever, abdominal pain, and headache were the other common symptoms for self-medication.

Our study found that [Table 4] most common source of information for self-medication was family members and friends (38.7%). Local chemists were the second most common source of information (29.3%).

Discussion

Our study found prevalence of practice self-medication as 55% among the rural population. High percentage of self-medication among the population might be due to the factors such as difficult road communication in the area, weak public health infrastructure, and peoples' trust in local chemists. Similar community-based, cross-sectional study in rural areas by Ahmed et al. had found that 50% of respondents practiced self-medication.[12] While Keshari et al. and Banjara and Bhukya had found very high percentages of (69% and 80%, respectively) self-medication practices among the rural population.[14,15] In our study, practice of self-medication was found to be more among the males than the females. Lack of time to go to doctors might influence the higher percentage among the males. Similarly, Shankar et al. also found significantly higher proportion of males practicing self-medication in their study.[16] Most of the respondents in the study were in

the age group of 18–35 years and self-medication practices were found to be most common in that age group. Aqeel et al. also found that self-medication practices were more common among younger age group of 15–30 years.[17] Self-medication practices were found to be more prevalent in more educated section of the respondents. Of those who were educated up to high school, 64% had taken self-medication in the last 6 months; similarly, 63% of those who were educated up to higher secondary or above had practice of self-medication. Education influences the health seeking behavior of the people; hence, there might be high percentages of self-medication practices among the higher educated sections. Similarly, Kaushal et al. found that prevalence of self-medication was found to be higher in well-educated persons compared to the illiterate or people with low education.[9] Patel et al. also found high prevalence of self-medication practices among the students of medical profession.[18] But some studies had observed that practice of self-medication more prevalent among illiterate people.[14,19] The study also observed that self-medication practices were more prevalent among upper socioeconomic classes. Selvaraj et al. also found that self-medication was more common among socioeconomically better off compared with respondents belong to lower socioeconomic status.[8] Access of the socioeconomically better off respondents to resources might be a contributing factor in their practice of self-medication.

Respondent's perception of mild illness and unwillingness to go to doctors were found to be the most common reasons for self-medication in our study. Similar findings were observed by Kaushal et al. too.[9] Kumar et al. and Nirmal et al. in their studies among the medical students found that majority of the students self-medicated because of convenience or the illness being considered too trivial for consultation by them.[20,21] While Phalke et al. found that major reasons for practicing self-medication were economic or nonavailability of health-care facility.[22]

Most common symptoms for self-medication among the respondents in our study were common cold, abdomen pain, fever, and headache. Keshari et al.[14] in their study in rural areas of Uttar Pradesh observed that fever, pain, and respiratory symptoms were the most common conditions/symptoms for self-medication. Kumar et al.[23] and Puwar[24] also observed that fever and common cold were the common illnesses for which self-medication was practiced.

Family members and friends, followed by local chemists were found to be the most common sources of information for self-medication in our study. Similarly, Ahmed et al.[12] stated that respondents primarily took advice from family, friends, and neighbors about self-medication. Shankar et al.[16] also found that local chemists were the most common source of information about self-medication.

Strength and Limitation

The study being conducted in a remote area of the region in the community setup taking rural population as sample might be helpful to throw some light on the subject although it had certain limitations such as small sample size, consideration of limited variables, and exclusion of traditional and AYUSH medication practices.

Conclusion

The study revealed high prevalence of self-medication practices among the rural population of East Khasi Hills district of Meghalaya. Higher percentages of self-medication practices were seen among male gender, higher educational and socioeconomic status, and younger age group. Health education to people regarding responsible self-medication is necessary to prevent misuse and adverse effect of self-medication. Involvement of community level health workers in educating the people will be very beneficial in this regards.

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