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A cross sectional study on self-medication practices among a selected rural community of Hooghly district, West Bengal

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ABSTRACT

Background: Medicines are often used incorrectly; around 50% of all medicines are prescribed, dispensed or sold inappropriately, while 50% of patients fail to take their medicines appropriately (WHO 2002). Self-medication is an important concern worldwide and WHO has laid emphasis on correctly investigating and controlling it. Self-medication practices have dramatically increased in the last few decades, especially in developing countries like India. Therefore, the present study was planned to assess the prevalence of self-medication for during acute illness episodes and factors associated among a rural community.

Methods: The cross sectional study was conducted from February to March, 2017 in Anandnagar village, Singur block. All the 900 households in village were included in the study. Data regarding pattern of self-medication were collected by using pretested structured schedule from head of the family or next available adult member. Data were analysed by using Microsoft Excel 2016.

Results: Amongst 900 household's data could be collected from 864 households. Majority respondents were housewives in age group 40-60 years and primary educated. 50.7% respondents reported having acute illness among family members in past 3 months, 48.5% amongst them reported using self-medication. Cough (56.6%), fever (20.3%) and pain (11.2%) were the conditions for which self-medication was used. Nearby medicine shop was the source of self-medication among 59.3% respondents. 2.3% reported using old prescriptions.

Conclusions: Half of the communities having acute illness were using self-medication. Uncontrolled use of medicines needs to be addressed as it brings potential health hazards, drug resistance and misuse.

Keywords: Self-medication, Rural area, Prevalence, Acute illness

INTRODUCTION

Self-medication is an important aspect in health-care delivery system especially in a developing country like India. In nearly 60-80% economically poor countries, the health-related problems are treated through self-medication as lower cost method.²

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

Responsible self-medication can reduce the burden on health care services and could be helpful in treating minor symptoms and illnesses that do not need consultation from a medical practitioner. However, many studies report that self-medication can lead to many problems like delay in health care seeking which in turn can lead to economic injuries. 4,5

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. In India self-medication is one of the important factors attributed to development of antimicrobial resistance. Studies has reported prevalence in India increasing from 31% in 1997 to 71% in 2011.

Studies of such nature will provide useful insight on the reasons for which patients resort to this practice and might help the policy makers and regulatory authorities. Data regarding self-medication in rural areas of eastern India especially West Bengal is not readily available therefore, a cross sectional study was planned in a selected rural area of Hooghly district of Singur Block, West Bengal with objectives; (a) to assess the prevalence of self-medication during acute episodes of illness among rural community, (b) to find the source of self-medication and common conditions for which self-medications are used and (c) to study factors associated with self-medication practices.

METHODS

The cross-sectional study was carried out in rural area of Anandnagar village, Singur block, Hooghly District of West Bengal during February-April, 2017. The Anandnagar village has population of 3915 of which 1916 are males while 1999 are females as per Population Census 2011. 10

There are 900 households in the village. By using census method all the households were included in the study. Data were collected through house to house visit by using pre-designed, pre-tested interview schedule which included information regarding socio-demographic factors-age, gender, literacy, occupation, and self-medication practices by any of the family member during the last episode of acute illness in the past 3 months.

Head of the family or the adult person present on the day of survey in the family who can provide the information were interviewed. Informed written consent was obtained before the interview. A total of 864 respondents one from each household could be interviewed.

Data were entered and analysed by using Microsoft Excel 2016. Results were presented in the form of frequency and cross tables. Chi-square statistic was used to assess statistical significance of association between variables. A significance level of p<0.05 was used in the analysis.

RESULTS

Out of 900 houses visited data could be collected form 864 households. Majority of the respondents were housewives (56.7%) between 40-60 years age group

(47.1%) and secondary school educated (34.1%) (Table 1).

Table1: Distribution of respondents according demographic factors (n=864).

Demographic factors	No. of respondents	%
Age (in years)		
20-40	345	39.9
40-60	407	47.1
Above 60	112	13.0
Gender		
Male	219	25.3
Female	645	74.7
Literacy level		
Illiterate	105	12.2
Primary school	265	30.7
Secondary school	295	34.1
Higher secondary school	129	14.9
Graduate	56	6.5
Postgraduate	14	1.6
Occupation		
House wife	490	56.7
Farmer	141	16.3
Private Job	28	3.3
Government Job	21	2.4
Labourer	68	7.9
Business	102	11.8
Ex. service	14	1.6

Out of 864 houses visited and interviewed acute illness was reported in 456 households in the previous 3 months (Table 2).

Table 2: Types of last acute illness reported among Family of the respondent in past 3 months (n=864).

Type of acute illness	No. of respondents	%
No acute illness reported	408	47.2
Cough and cold	258	29.9
Fever	93	10.7
Pain	51	5.9
Diarrhoea	21	2.5
Skin diseases	18	2.1
Head ache	15	1.7

Out of 456 family members who had suffered from acute illness, 221 (48.4%) practiced self-medication. Common cold (56.6%), followed by fever (20.3%), Pain (11.2%), diarrhoea (4.6%), skin diseases (4%) and headache (3.3%) were the acute illnesses reported among these family members (Table 3). Self-medication was most commonly used for cough and cold (51.1%) followed by fever (23.8%). Significantly higher proportion of patients

were practicing self-medication in case of pain and diarrhoea (p=00006) (Table 3).

Table 3: Type of acute illness and practice of self-medication among family members of the respondent.

Type of acute illness#	Practicing self-medication	Not practicing self-medication	Total
**	(n=221)	(n=235)	(n=456)
	N (%)	N (%)	N (%)
Cough and common cold	113 (51.1)	145 (61.8)	258 (56.6)
Fever	37 (16.7)	56 (23.8)	93 (20.3)
Pain	36 (16.3)	15 (6.3)	51 (11.2)
Diarrhoea	15 (6.8)	6 (2.6)	21 (4.6)
Skin diseases	9 (4.1)	9 (3.8)	18 (4)
Head ache	11 (5)	4 (1.7)	15 (3.3)

[#] χ 2 statistic is 19.39, p=0.0006. The result is significant at p<0.05.

Self-medication practice was more common among females and was significantly higher, compared to males (p=0.004).

Table 4: Age and genderwise practice of selfmedication among family members of the respondent.

Demographic factors	Practicing self- medication (n=221)	Not practicing self-medication (n=235)	
	N (%)	N (%)	
Gender*			
Male	94 (42.5)	131 (55.8)	
Female	127 (57.5)	104 (44.2)	
Age (in years)**			
≤5	11 (5)	19 (8.1)	
5-15	44 (20)	41 (17.5)	
15-45	110 (49.7)	126 (53.6)	
>45	56 (25.3)	49 (20.8)	

^{*}The $\chi 2$ statistic is 7.95, p=0.004. The result is significant at p<0.05; **The $\chi 2$ statistic is 3.36, p=0.33. The result is significant at p<0.05.

Though, self-medication was commonly practiced in the age group of 15-45 years (Table 4), there was no significant difference in self-medication practices in different age categories (p=0.33). Commonest source of medicines used for self-medication was the medicine

shop nearby, where they were obtained over the counter after narrating the symptoms (59.3%).

Medicines for self-medication were commonly obtained over the counter from the nearby medicine shop in diarrhea (80%), pain (63.9%), headache (63.6%), skin infections (63.7%) in fever (56.8%) and cough and cold (55.8%). However, for headache and skin infections 27% of the patients reported using medicines already available at home (as per older prescriptions) (Table 6).

Out of 131 cases that practiced self-medication through over the counter medicines from nearby medicine shops only 64.8% reported that they got advice regarding dose and duration of drugs from medicine shop owner. 2.3% used old prescription for buying medicines.

Table 5: Distribution of respondents according to the source of medicines for self-medication (n=221).

Source of medicines for self-medication	No. of respondents	%
Over the counter from nearby medicine shop	131	59.3
Medicine already available at home	48	21.7
No allopathic medicine used (home remedy)	42	19

Table 6: Distribution of respondents according to type of illness and source of medicines for self-medication.

	Source of medication		
Type of illness	Nearby medicine shop (n=131)	Available at home (as per older prescriptions) (n=48)	No allopathic medicine used (home remedy) (n=42)
	N (%)	N (%)	N (%)
Fever	21 (56.8)	9 (24.3)	7 (18.9)
Cough and common cold	63 (55.8)	27 (23.9)	23 (20.3)
Head ache	7 (63.6)	3 (27.3)	1 (9.1)
Diarrhea	12 (80)	2 (13.3)	1 (6.7)
Pain	23 (63.9)	4 (11.1)	9 (25)
Skin diseases	5 (63.7)	3 (27.2)	1 (9.1)

Most common reason for self-medication was the perception that these illnesses are not severe (39.4%), followed by easy availability of over the counter drugs (21.4%), economic reasons—doctor's consultation fees (16.3%).

Table 7: Reasons for self-medication use (n=221).

Reasons of self- medication	No. of respondents	%
Illness not severe	87	39.4
Easy availability of drugs	47	21.4
Economic reasons	36	16.3
Lack of time	23	10.4
Convenience	19	8.5
Other	9	4.0

DISCUSSION

In this community based cross sectional study the prevalence of self-medication practice was 48.4%. This is marginally less than the reported prevalence from study conducted in a rural area of south India (53.4%), a study in rural area of Meghalaya (55%) and rural area of Kanchipuram district (58.4%). 11-13

In the present study, self-medication was most commonly used for cough and cold followed by fever. Similar findings were reported by Nidagundi et al in their study conducted in rural area of Karnataka. Similar findings were also reported by Balamurugan and Ganesh in a study conducted in coastal areas of Puducherry. Cough and common cold (28.3%) were found to be the most common symptoms for self-medication.

The present study also found that significantly higher proportion of patients were practicing self-medication in case of pain and diarrhea.

Self-medication practice was more prevalent among females (57.5%) then males in this study whereas, a study reported higher prevalence of self-medication among males (54.7%) this difference may be due to the fact that females mostly were housewives and lacked access to over the counter medicines from medicine shops due to orthodox social systems and lack of economic independence (p=0.004). Self-medication was commonly used in the age group of 15-45 years. Amareswara et al also reported that self-medication was common among 20-39 year's age in their study conducted in rural area of Kadapa, Andhra Pradesh.

Commonest source of self-medication was nearby medicine shop (59.3%) and 2.3% used old prescription for buying medicines. 21.7% were using left over medicines available at home.

This study confirms the findings of Balamurugan and Ganesh in a study conducted in coastal areas of Puducherry that major source of self-medication 57.3% nearby pharmacist and old prescriptions 21.5%. Pharmacy (92.73%), other small shop (6.14%), neighbor (0.55%) and left over of previously prescribed medicines were the places for procuring medicines for selfmedication. ¹¹

Most common reason for self-medication was perception that the illness is not severe (39.4%). Similar findings were observed among the respondent's perception as mild illness (52.7%) as the most common reason for self-medication.¹⁴ In another study minor ailment (56.4%) and unavailability of doctors (22.3%) were the leading cause for practicing self-medication.¹¹

CONCLUSION

Almost half of the community having acute illnesses like cough and cold, fever, pain and diarrhea, were practicing self-medication considering them as minor illnesses and procuring medicines for self-medications from nearby medicine shops. Over the counter drug OTC use and self-medication reduce the burden on health care delivery system but uncontrolled use of medicines needs to be addressed as it brings potential health hazards especially to vulnerable groups such as children, elderly and pregnant women. There is also risk of drug resistance and misuse. Therefore, there should be a policy for permitted OTC drugs used for self-medication.

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