

# Study on Prevalence and Pattern of Self Medication Practices in a Rural Area of Bihar

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## Abstract

**Background:** Self-medication is common in most parts. It leads to adverse effects. The present study was conducted to assess the pattern of self-medication and reasons behind this practice. **Subjects and Methods:** The present study was community based cross-sectional in nature conducted upon 198 adults residing in the rural field practice area. Sociodemographic profile and details of self-medication were noted. **Results:** 63.1% of the respondents were males. 35.9% of them belonged to the age group of 30-40 years. 32.8% were illiterate and 85.9% were Hindu. A total of 198 respondents practiced self-medication (51.2%). Most common symptom was headache (85.9%). Common cold (63.1%), fever (56.1% and gas (31.8%) were other common complaints. Paracetamol (90.0%), pantoprazole (51%), other NSAIDs (42.9%) and cold tablets (36.9%) were other medicines used commonly. 69.2% respondents said that they were practicing it for minor illnesses, 36.9% cited economic reasons while 46% said that consulting a physician needed much time and self-medication was time saving. **Conclusion:** Prevalence of self-medication is high. Strict drug regulations are needed.

**Keywords:** Cross-sectional study, Pattern, Rural area, Self-medication.

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**Received:** December 2019

**Accepted:** January 2020

## Introduction

Self-medication has been defined by World Health Organization as 'the selection and use of medicines by individuals to treat self-recognized illnesses or symptoms.'<sup>[1]</sup> It essentially means taking medicines by people on their own without consulting a doctor. It is often based on previous experiences, advice from the chemist or by looking at the inappropriate references e.g. google, social media etc. It is one of the components of self-care and is thought to be similar to personal hygiene, exercise, dietary modifications etc.<sup>[2]</sup>

Injudicious use of medicines is associated with various risks which include side effects, non-improvement in the illness, serious reactions and even death. It is also one of the important causes of increase in antibiotic resistance.<sup>[2]</sup>

There has been increasing trend in the practices of self-medication. It is due to increased literacy, better access to information and lack of drug regulations for the sale of medicines. Various studies have been conducted to assess the burden of this problem.<sup>[2-5]</sup> Prevalence of self-medication was found to be varying between 12.7% to 95% in developing countries. The prevalence of self-medication was found to be 31% and 71% in studies conducted in Nagpur and Karnataka respectively.<sup>[6]</sup>

No such study has been conducted in this area. Hence, the present study was proposed.

## Aims & Objectives

The present study was conducted to assess the prevalence and pattern of self-medication in rural area of Bettiah, Bihar.

## Subjects and Methods

### Study setting:

The present study was conducted at the Department of PSM, Government Medical College, Bettiah, Bihar. The institute caters to population of West Champaran and adjoining area of Nepal.

### Study Design:

The present study was cross-sectional in nature conducted at the Department of PSM, Government Medical College, Bettiah.

### Study subjects:

Study subjects included adults living in the area covered by rural training center of the institute.

### Inclusion criteria:

The adults living in the area covered by rural training center of the institute were included in the present study.

### Exclusion criteria:

Seriously ill patients and those who refused to give consent were excluded.

**Sampling:**

Sample size was calculated using the formula

$$\text{Sample size} = 4 pq/d^2$$

Kumar et al found the prevalence of self-medication in Maharashtra to be 51.75%.<sup>[4]</sup> Considering relative precision of 20% and design effect of 2, the sample size was calculated to be 185.

20 randomly selected Anganwadi centers were approached. In each center, 10 households were selected randomly. In each household, one adult person was studied. 2 persons refused to participate. Thus, a total of 198 persons were included in the present study.

**Data collection procedure:**

CDPO of the block was informed and consent was taken. AWCs were approached and informed about the study and their help was taken for the household survey. Pre-tested proforma was used for data collection which included questions regarding background information, details of illness and any self-medication practiced.

**Data analysis:**

Data was entered in Microsoft Excel and analyzed using SPSS software. Percentage, proportions and contingency tables were used for description of the data. P value <0.05 was considered as statistically significant.

**Ethical consideration & permission:**

Approval from Institutional Ethics Committee was obtained. Informed consent was taken from the patients. Confidentiality of records was maintained.

**Results**

A total of 198 subjects were included in the present study. [Table 1] shows sociodemographic details. 63.1% of the respondents were males. 35.9% of them belonged to the age group of 30-40 years. 32.8% were illiterate and 85.9% were Hindu. A total of 198 respondents practiced self-medication (51.2%).

**Table 1: showing sociodemographic details (n=387)**

Sociodemographic factor	Frequency	%
Age (in years)		
-<20	66	17.1
-20-30	108	27.9
-30-40	139	35.9
-40-50	46	11.9
->50	28	7.2
Sex		
-Male	244	63
-Female	143	37
Education		
-Illiterate	128	33.1
-Primary	108	27.9
-Secondary and above	151	39
Religion		
-Hindu	333	86
-Muslim	54	14

[Table 2] shows the common symptoms for which self-medication was taken. Most common symptom was

headache (85.9%). Common cold (63.1%), fever (56.1% and gas (31.8%) were other common complains.

**Table 2: showing symptoms for which self-medication was taken (n=198)**

Symptom	Frequency	%
Headache	170	85.9
Fever	111	56.1
Common cold	125	63.1
Gas	63	31.8
Infections	34	17.2

\*-multiple response

[Table 3] shows the drugs used. Paracetamol (90.0%), pantoprazole (51%), other NSAIDs (42.9%) and cold tablets (36.9%) were other medicines used commonly.

**Table 3: showing common drugs used for self-medication (n=198)**

Drug used	Frequency	%
Paracetamol	180	90.9
Other NSAIDs	85	42.9
Pantoprazole	101	51
Cold tablets	73	36.9
Antibiotics	59	29.8
Herbal medicines	44	22.2

\*-multiple response

[Table 4] shows the reasons cited for use of self-medication. 69.2% respondents said that they were practicing it for minor illnesses, 36.9% cited economic reasons while 46% said that consulting a physician needed much time and self-medication was time saving.

**Table 4: showing reasons for self-medication (n=198)**

Reason	Frequency	%
Minor illness	137	69.2
Economic	73	36.9
Lack of time	91	46
Convenient	50	25.3

\*-multiple response

**Discussion**

The present study included 198 adults residing in the field practice area of rural training center. 63.1% of the respondents were males. 35.9% of them belonged to the age group of 30-40 years. 32.8% were illiterate and 85.9% were Hindu. Chari et al found that 46.5% respondents were male and 54.8% belonged to the age group of 18-40 years.<sup>[6]</sup> Keshari et al observed that 81% were males and the most common age group was 31-45 years (44%). Sinha et al found that 68.9% were male & 31.1% were females. Range of age was 18 to 64 yrs. Maximum no. of subjects were in the age group 31-40 yrs. Maximum no. of subjects 155 (47.6%) were having education up to primary level.<sup>[3]</sup>

A total of 198 respondents practiced self-medication (51.2%). Chari et al found that prevalence of self-medication was 35.1%.<sup>[6]</sup>

Most common symptom was headache (85.9%). Common cold (63.1%), fever (56.1% and gas (31.8%) were other common complains. Paracetamol (90.0%), pantoprazole

(51%), other NSAIDs (42.9%) and cold tablets (36.9%) were other medicines used commonly. Chari et al observed that paracetamol was most commonly used drug for headache 86.1% (179) followed by fever (46.2%), common cold (15.4%) and body ache (10.6%). Ibuprofen was also commonly used for headache (10.1%), fever (3.8 %) and body ache (3.4%). Diclofenac was mostly used for body ache (5.8%). Most common conditions/symptoms for self-medication were fever (72.6%), pain (64.3%) and respiratory symptoms (57.1%), followed by infections, headache and diarrhoea, etc. as found by Keshari et al.<sup>[3]</sup> They commented that the most commonly used drugs for self-medication were paracetamol (56.5%), drugs for gastrointestinal problems (40.5%), nonsteroidal anti-inflammatory drugs (NSAIDs) (39.9%) followed by cold remedies, antimicrobials, etc. Sinha et al found that body ache/joint pain was most common symptom for which almost 48% subjects sought OTC. Other symptoms were headache (27.6%) and cough (24.9%). Painkillers were the most common group of medicine used by 55.3% subjects. Other commonly used groups of medicine were flu/cough remedies (46.7%) and indigestion/heart burn /acidity used by 31.3% subjects.<sup>[2]</sup>

69.2% respondents said that they were practicing it for minor illnesses, 36.9% cited economic reasons while 46% said that consulting a physician needed much time and self-medication was time saving. Chari et al found that 80% of the people practicing self-medication did so because they felt that the problem was minor complaint and can be handled without consulting a medical practitioner.<sup>[6]</sup> Keshari et al found that the common reasons for self-medication were time saving (45.2%) followed by high cost of consultation (42.3%), minor illness (39.9%) followed by convenience (25.0%).<sup>[3]</sup> Sinha et al reported that major

reason for practicing OTC drug in self-medication was high cost of consultation (41.8%), followed by mild illness/Doctor's advice not needed (21.5%).<sup>[2]</sup>

## Conclusion

About half of the respondents practiced self-medication in the past six months. Paracetamol and pantoprazole were the common medicines used. Headache, fever and gas were the common ailments. Perceiving symptom as minor illness and lack of time were the common reasons cited. Many of non-OTC drugs were being used as self-medication which can lead to adverse effects and worsening of the condition. Patient awareness and strict implementation of drugs and cosmetics act is essential.

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**How to cite this article:** Kumar P, Vimal AK. Study on Prevalence and Pattern of Self Medication Practices in a Rural Area of Bihar. *Asian J. Med. Res.* 2020;9(1):CM04-CM06.  
DOI: [dx.doi.org/10.47009/ajmr.2020.9.1.CM2](https://doi.org/10.47009/ajmr.2020.9.1.CM2)

**Source of Support:** Nil, **Conflict of Interest:** None declared.