

# Analgesics self-medication among undergraduate students of a Rural Medical College

Sir,

According to the WHO, self-medication is a part of self-care.<sup>[1]</sup> However, it may cause more harm than good due to any irresponsible use, especially by the young medical students who have easy access to all sort of drugs.

Pain is one of the most common sufferings of humankind which compels for analgesic self-medication with nonprescription drugs and students are no exception to this behavior.<sup>[2,3]</sup> Due to paucity of literature regarding self-medication among medical students, this study was designed to know the prevalence and pattern of analgesic self-medication among the undergraduate students of a rural medical college in Bihar, India.

An observational cross-sectional study was conducted among students of all phases of MBBS. A predesigned semi-structured, validated, anonymous, and confidential questionnaire with voluntary participation was used to collect the relevant information after ethical clearance. Cronbach's alpha test was applied to test the reliability of the questionnaire and it was found to be 0.75. Questionnaire consists of close-ended questions related to personal and sociodemographic data, symptoms that led to analgesic use, type of most used analgesics, most important source of information, and frequency of analgesics use in last 1 month.

The data were analyzed by descriptive and inferential statistics. Odds ratio and Chi-square test were applied. The sum of percentages is not always 100% as some questions contained multiple responses.

A total of 308 completely filled questionnaires were evaluated out of 320 participants, giving a response rate of 96.25%. The mean age was  $21.4 \pm 1.85$  years with a male to female ratio of 1.33:1. The prevalence of analgesic self-medication was 49.7% ( $n = 153$ ). Similar studies done on medical students in India showed prevalence of analgesic use ranging from 23%–90%.<sup>[2-4]</sup>

This study showed higher prevalence (54.2%) in males, similar to other studies,<sup>[5]</sup> but few others had found it more in females.<sup>[2-4,6]</sup> Self-medication was significantly higher in age group  $\geq 20$  years as compared to age group  $\leq 19$  years [Table 1]. This might be due to increased exposure of students to clinical subjects as their curriculum progresses.

The most dominant symptom compelling self-medication was found to be headache (48.4%), followed by a cough, cold, and fever (44.4%) and bone and joint pain (39.9%). However, among females, dysmenorrhea was the most common (84.3%) reason for analgesic self-medication. These findings are supported by other researchers.<sup>[4,6-8]</sup> About one-fifth of students admitted that they were taking analgesics for general well-being and just for relief of emotional discomfort, in the absence of any pain. The reason behind this behavior might be due to relief of work-related fatigue and easy availability of analgesics as over the counter drugs.

When asked about the reason for opting self-medication rather than doctor's consultation, about 49% revealed that

**Table 1: Utilization pattern of analgesic self-medication among undergraduates (n=308)**

Characteristics	Self-medication with analgesic			$\chi^2$ (P)	OR (95% CI)
	Yes, n=153 (%)	No, n=155 (%)	Total		
Age (years)					
≤ 19	11 (30.6)	25 (69.4)	36	5.96 (0.0146)*	1
≥ 20	142 (52.2)	130 (47.8)	272		2.48 (1.17-5.24)
Sex					
Males	83 (47.2)	93 (52.8)	176	1.04 (0.3078)	1
Females	70 (53.0)	62 (47.0)	132		1.26 (0.80-1.98)
Study year					
MBBS 1	29 (43.3)	38 (56.7)	67	1.45 (0.693)	1
MBBS 2	41 (50.6)	40 (49.4)	81		1.34 (0.70-2.57)
MBBS 3-I	43 (52.4)	39 (47.6)	82		1.44 (0.75-2.76)
MBBS 3-II	40 (51.3)	38 (48.7)	78		1.37 (0.71-2.65)

\*Significant. OR=Odds ratio, 95% CI=95% Confidence interval

## Research Letter

their illnesses was too minor to be consulted and also there was a lack of time for consultation (20%) compelling them to take drugs for immediate relief. Other reasons mentioned were their previous exposure to self-medication without any untoward side effect (15%), self-diagnosis (8%), and privacy factors in females (6%).

The most commonly used analgesic for self-medication was acetaminophen (paracetamol), followed by fixed-dose combinations of paracetamol and other nonsteroidal anti-inflammatory drugs such as ibuprofen and diclofenac. Paracetamol is the most commonly available analgesic preparation with favorable side effect profile.

Evaluation of questionnaire also revealed that about 47% of students took decision for self-medication after obtaining information about the treatment from medical books and internet, whereas about 20% had taken advice from seniors/friends and about 13% from chemist.

There are certain limitations of this study. Recall bias cannot be completely ruled out and mutual influence between the students while filling the questionnaire is also possible. Attitude of students toward self-medication was also not tested.

The current study offers an insight about analgesic self-medication behaviors in students of a rural medical college. This information can be used for drug awareness programs to make students aware of potentially harmful side effects and to curtail their irresponsible analgesic self-medication behavior.

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### Conflicts of interest

There are no conflicts of interest.

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