

A Review of Self-Medication Practices among Students of Health-Care Professions in India

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ABSTRACT

The principles of medication management include storing, ordering, dispensing, and administration of the medications. Each of these steps is equally important to achieve the maximum benefits of the medicines. However, self-medication is common across the globe where these principles are severely compromised. Self-administration of medication is an approach in which an individual uses a medicine or drug to treat any symptoms or diagnosed disorder. It is an individual's initiative to take medicines without consulting a doctor and commonly used to gain personal independence and autonomy to treat minor illness. Its prevalence in developing countries is significantly high and ranges from 12.7% to 95%. This review examines self-medication practices among students of various health-care courses. The search criteria included studies published from 2008 to 2018. All studies that explored the use of self-medication practices among the Indian students of various health-care professions were retrieved. Three major databases Google Scholar, PubMed, and Shodhganga were searched. The keywords used for search included "self-medication," India, prevalence, students, medical, dental, nursing, pharmacology, and physiotherapy. In total, 106 articles were reviewed, 21 of these studies met the inclusion criteria. The number of total participants across all studies was 7271. Overall, 5875 (80.80%) participants were practicing self-medication. Analgesics, antipyretics, antibiotics, antacids, and anti-allergic drugs were commonly used drugs for self-medication. Some studies also revealed that students have poor knowledge regarding drug reactions, and this can significantly compromise patient safety. Whereas, the study reveals that the practice of self-medication among the students is alarmingly high. This presents a significant challenge to patient safety and also poses a threat to public health in view of ever-increasing antibiotics resistant. The government must take immediate actions to regulate over-the-counter medication availabilities and also ensure a wider education program for the public.

KEYWORDS: Health-care professionals, India, practice, review, self-medication, students

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INTRODUCTION

Medicines are used for the prevention and cure from diseases and promotion of health status. Medicines are generally prescribed by trained doctors and health-care professionals. Medication is a process to use a medicine or drug used to treat or prevent diseases. Medication is done by qualified health professionals at health centers across the world.^[1,2] Self-medication is a

human approach in which an individual uses a medicine or drug to treat diseases or symptoms or the intermittent or regular use of a prescribed medicine for chronic or recurrent disease or symptoms.^[3,4] Self-medication is

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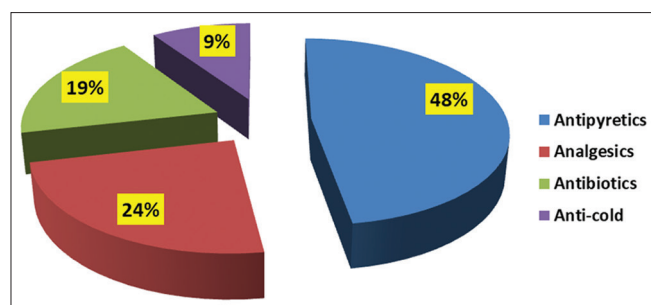


Figure 1: Common medicines used by the students for self-medication

an individual's initiative to take medicines without consulting a doctor. Self-medication is commonly using as gaining personal independence and autonomy to treat minor illness. It also includes the uses of medication treatment of children, elderly, and adult family members. Self-medication is common at global level.^[5,7] The WHO has reported self-medication to be economical and time-saving alternative for the treatment of minor ailments.^[8] Self-medication is a good area of research because of its increasing global prevalence and associated problems such as incorrect self-diagnosis, lack of resources, convenience, drug interactions, resistance of antibiotics, and lack of awareness [Figure 1]. Many studies have been done to find the prevalence and practices of self-medication among the general population.^[9] The prevalence of self-medication in developing countries widely varies between 12.7% and 95%. Several studies have indicated that inappropriate self-medication results in adverse drug reactions, disease masking, and inaccurate diagnosis of disease, increased morbidity, drug interactions, antibiotic resistance, and wastage of health-care resources.^[10,11]

The author is of the opinion that this is the first review encompassing the topic of self-medication in the Indian context. The review not only gives an insight into the general prevalence of self-medication but also highlights associated practices, factors, and medicines used. There were some variations in the study setting, health professions, sample selection, sample size, and study duration. The review had several limitations that should be recognized. First, it restricted only to Google Scholar, PubMed, and Shodhganga. The selected papers were published in a time period of the year 2008–2018.

Inclusion criteria

A study was included if:

1. The sample was composed of students of health-care professions in India
2. The medication occurred without any consultation
3. It analyzed all types of drugs except sedatives and opioids

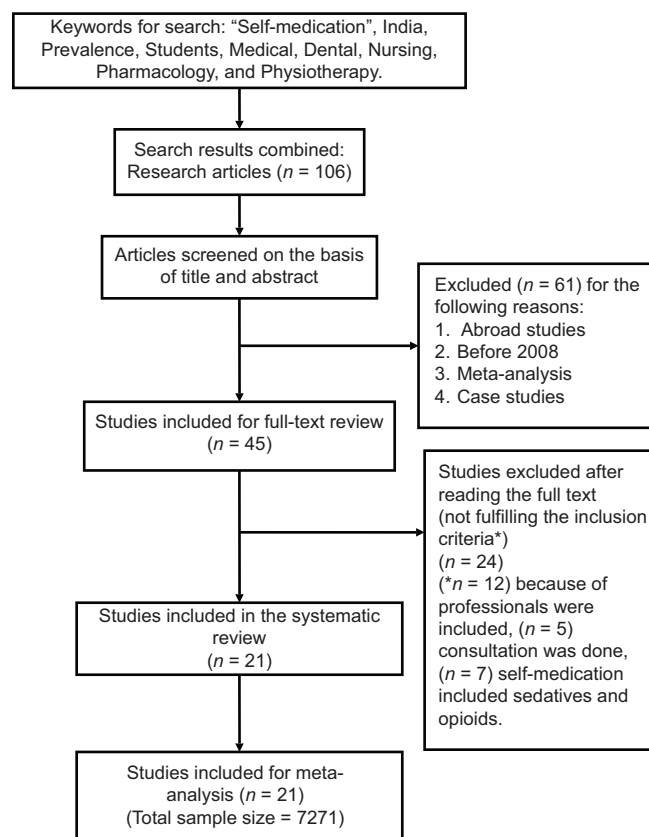


Figure 2: Flow diagram describing process of articles being reviewed and selected for the prevalence of self-medication

4. Only primary research studies were considered, no case study and meta-analysis included [Figure 2].

Characteristics of the research articles

Of the 106 research studies screened, 45 full texts were read and finally 21 articles were selected for the study that met the inclusion criteria, for total 7271 subjects involved. All research studies were “descriptive population basis” studies in which data were collected through a semi-structured questionnaire. All the studies were carried out in India.

Prevalence of self-medication

In the present study, 21 articles were included to assess the broader concert of self-medication among students of health-care professions in India. The prevalence of self-medication by the students ranged from a minimum of 58% to a maximum of 98%. As per Table 1, the present study revealed that prevalence of self-medication was 80.80%.^[12-32]

Common medicines for self-medication

In the present study, out of 21 research articles, the majority of studies (47.62%) revealed that antipyretics were most frequently used in self-medication. The use of analgesics and antibiotics was 23.81% and 19.05%, respectively. Only 9.52% of studies were indicating the most common use of anticold drugs.

Table 1: Prevalence of self-medication among students of health-care professions^[12-32]

Study and year	Sample size	Prevalence (%)	Most commonly used medicine	Profession of the samples
Prashant Wadagbalkar <i>et al.</i> (2018)	130	85.38	Antipyretics	Medical and nursing
Renu Chauhan (2017)	200	83	Analgesics	Medical
Swapna RN <i>et al.</i> (2017)	150	80	Anticold	Medical
Samarth V <i>et al.</i> (2017)	531	58	Antibiotics	Medical, dental, and paramedical
Venkataraman G <i>et al.</i> (2017)	165	81.2	Antibiotics	Dental
Gupta K <i>et al.</i> (2017)	47	98	Antibiotics	Medical
Bhagunde LK <i>et al.</i> (2017)	80	91.25	Antipyretics	Nursing
Shweta Singla <i>et al.</i> (2017)	1538	88.6	Antipyretics	Medical and paramedical
Jayita P <i>et al.</i> (2017)	300	65	Antipyretics	Medical
Ghoalp PR <i>et al.</i> (2016)	100	96	Analgesics	Nursing
Sodhi Aman <i>et al.</i> (2016)	300	97.33	Antipyretics	Dental and paramedical
Sharat G <i>et al.</i> (2016)	360	92.7	Analgesics	Medical and dental
Robert VL <i>et al.</i> (2016)	350	82.57	Analgesics	Medical and nursing
Ritesh K <i>et al.</i> (2016)	686	72	Antibiotics	Medical and paramedical
Shivani Sama <i>et al.</i> (2015)	400	76	Analgesics	Medical and nursing
Syed SA <i>et al.</i> (2015)	142	84.5	Anticold	Nursing
Philip <i>et al.</i> (2015)	892	87.5	Antipyretics	Medical and paramedical
Arti AK <i>et al.</i> (2015)	488	71.7	Antipyretics	Medical
Sheethal MP <i>et al.</i> (2014)	112	65.18	Antipyretics	Nursing
Neetu S. <i>et al.</i> (2014)	200	63	Antipyretics	Nursing
Stephen <i>et al.</i> (2013)	100	84	Antipyretics	Nursing

DISCUSSION

Self-medication is a quiet popular practice among the general population as well as health-care professionals all over the world.^[33] In spite of extensive research, number of published reviews, and information, along with various rules and regulations in place to control by governmental agencies, self-medication remains a major global problem. Self-medication has a multitude of associated problems, and some of the major problems are wastage of resources, increased resistance of pathogens, and causes for serious health hazards such as adverse reaction and prolonged suffering.^[34] The present study revealed that the prevalence of self-medication was 80.80%. In Jordan, 79% of medical and pharmacy students are practicing self-medication, and it is nearly equal to the present study.^[35]

Out of total 189,279 participants from various studies covered in the review, self-medication was practiced by about 81,665 (43%) participants, with the least from Sweden (0.3%) and the highest reported from developing countries such as Bangladesh, Ethiopia, Sri Lanka, and Indonesia. The present study also communicated that the prevalence of self-medication is also high in India. In a developing country like India, many studies have cited reasons such as high absenteeism, poor quality of services, rampant corruption, and long travel distances as prominent reasons for poor access of public sector

health facilities.^[9,36] These findings are also supporting the present study. In developing countries, reported prevalence rates are much higher, with 84% in Pakistan, 78% in Saudi Arabia, 67% in Nigeria, and 92.3% in Slovenia, and the prevalence of self-medication in India is nearly equal to the Asian countries.^[6,9,37] A study was conducted among Jordanian medical students regarding practice of self-medication. The prevalence of self-medication was high (68%) in European countries, but in India, the prevalence was comparatively higher.^[38] The study revealed that analgesic medicine uses were more common among the students and the finding was supporting the present study.^[39] The present study communicated that the use of analgesics, antibiotics, and anticold medicines was more common among the students and it was supported by the Iranian study.^[40] Self-medication is a global health concern. There should be restriction on self-medication practices and over-the-counter (OTC) use of drugs.

CONCLUSION

Self-medication was seen as a widespread phenomenon. The World Health Organization reported alarming levels of resistance to antibiotics in member countries. The practices of self-medication pose a serious risk to communicable and noncommunicable disease control and public health in general. Inappropriate knowledge in population and lack of attention of the public health

issue may increase the practices of self-medication. It is necessary to pay attention on the issue to minimize adverse reactions of drugs and antibiotic resistance. A sound educational program should be immediately implemented for increasing awareness and importance of this issue. At the same time, while implementing the rules and regulations, governments should improve on providing adequate and affordable access to health-care services. There should be a close supervision on OTC medicine use and distribution. Self-medication may increase the disease burden in the future.

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Conflicts of interest

There are no conflicts of interest.

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