

**PREVALENCE OF SELF-MEDICATION PRACTICES AMONG  
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**ABSTRACT**

Self-medication is defined as medication of oneself especially without the advice of a physician. The objective of the study is to evaluate the self-medication practices among medical, pharmacy, nursing, paramedical students in Malappuram district. For the study, students were asked for their one-year illness recall and answer to the questionnaire. A questionnaire consisting of demographic profile, illness and treatment strategies was prepared were investigated and analysed. Of a total of 330 students, 313, (94.85%) reported that they have practiced self-medication. Most of the self-medication practices were obtained from the pharmacy field and the most commonly used drugs were nasal-decongestants, vitamins, analgesics and antibiotics. Headache and nasal congestion (93.94% each) were cited to be the

most common ailment for which self-medication was practiced closely followed fever (92.73%). About 310 (94%) students prefer self-medication to them and their family members. Knowledge from health magazines, internet, and books were major sources of self-medication. About 45% were using other system of medicine like Ayurveda as self-medication. Reason behind self-medication is ease of availability and fast onset of action. Drug regulatory authorities and health care professionals have to educate medical students about their side effect and adverse drug reaction.

**KEYWORDS:** Self-medication; Students; Kerala; Risk Identification.

**1. INTRODUCTION**

Self-medication practices involves the consumption of drugs to treat self-diagnosed symptoms or disorders and also includes the use of prescribed drugs intermittently or

continually for chronic or recurrent ailments or its manifestations.<sup>[1]</sup> Self-medication is widely practiced as a first-line option in most types of illness and has led to the widespread concern over the irrationality of drug use.<sup>[2,3]</sup> The prevalence of such practices is alarmingly high in developing countries where achievement of universal healthcare is far from achieved. The scenario in India, which is stratified by the World Bank into lower-middle income country is not much different from other developing nation counterparts.<sup>[4]</sup> Many studies have concluded that people who tend to self-medicate detain care seeking and this in turn can result in paradoxical increase in healthcare cost as a result of the delay in proper diagnosis and therapy. There also arises the problem of drug-interactions and anti-biotic resistance due to lack of guidance from a qualified practitioner who could have mitigated and prevented such instances with his clinical expertise.<sup>[5]</sup> In the light of these incidences, WHO has emphasised the need to regulate such practices and need to educate the public on the aspects of self-medication.

Even though educated and responsible self-medication practices can reduce the unnecessary cost burden in patient and payer perspective and result in overall cost-minimization; some conditions are to be realized for this to be effective. These conditions comprise of: the drugs used are indicated for those ailments which are self-recognizable and consumer is educated on the proper drug use and its risks as well as benefits. In developing countries, professional health care is relatively expensive and many drugs which are available as prescription drugs in developed countries is available as OTCs; thereby leading to strong reliance on such medications to treat prevalent conditions.<sup>[6,7]</sup> Although as per drug laws relevant to India, self-medication practice is permitted for over-the-counter (OTC) drugs; there is absence of a well-defined list of OTC drugs. Those drugs which do not fall under Schedule H or G are regarded as OTC and can be procured without the prescription of a registered physician and are consumed as self-medication.

Paradoxically self-medication practices can aggravate the global problem of mounting medical costs due to medication wastage; which is defined as any drug product dispensed by prescription or purchased as an OTC medication that is never fully consumed. Numerous factors are thought to contribute to self-medication and this can vary in a region-specific manner with few of them being lifestyle, easy drug access, socioeconomic factors etc.

This questionnaire based study was aimed at assessing the prevalence of self-medication among the students of various professional medical courses in Malappuram district of Kerala and scrutinize the different aspects of such practices.

## 2. METHODOLOGY

The study was conducted in Perinthalmanna, which is known as hospital city of Malabar (Northern Kerala). Perinthalmanna houses one medical college, three super speciality hospitals and numerous self-financing institutions offering para-medical courses. The cross-sectional survey was conducted for a duration of 5 months from September 2014 to January 2015. 330 undergraduate medical and paramedical students were randomly selected from various institutions and administered a pre-validated questionnaire. The sample size was estimated using Epi-Info 2002 (CI=90%; level of significance=5%). The questionnaire was structured with multiple-choice options and was designed to capture details on demography, aspects on self-medication such as reason, indications for which commonly used, knowledge, opinion etc. Informed consent was obtained from the participants which detailed the study objectives and provided assurance on the aspects of confidentiality while publication or dissemination of results. Data were analysed using SPSS 18 windows version and the results were depicted using figures and percentages. Chi-square test was used to identify association among variables.

## 3. RESULTS

A total of 330 students formed the study sample of which 135 (40.9%) were males and remaining 195 (59.09%) were females. Mean age of the sample was determined as 19.4 (S.D=1.1 years). 39.70% (n=131) were Pharmacy students, % (n=99) were nursing students, 16.06% (n=53) were M.L.T students and 14.24% (n=47) were medical students. Of the total study sample, 94.85% (313) preferred to rely on self-medication to treat minor ailments in contrast to 5.15% (17) who opted against self-medicating. The difference was found to be extremely significant with  $p < 0.0001$ . 312(94.5%) preferred self-medication for themselves and their families, 267(80.91%) preferred self-medication for their neighbours and 200 (60.61%) preferred the same for friends and relatives. 97.04% (131) of the male subjects and 93.33% (182) were found to rely on self-medication. The difference was found to be insignificant with  $p = 0.788$  The category of drug for which self-medication was practiced was stratified with respect to gender and depicted in Table 1.

**Table 1: Stratification of self-medication use in each gender**

|                     | Male         | Female       | p-value |
|---------------------|--------------|--------------|---------|
| Vitamins            | 82 (62.6%)   | 103 (56.59%) | 0.583   |
| Antibiotics         | 63 (48.1%)   | 113 (62.09%) | 0.182   |
| Analgesics          | 113 (86.26%) | 173 (95.05%) | 0.514   |
| Nasal Decongestants | 115 (87.79%) | 171 (93.95%) | 0.648   |
| Others              | 25 (19.1%)   | 47 (25.82%)  | 0.314   |

Headache and nasal congestion (93.94% each) were cited to be the most common ailment for which self-medication was practiced closely followed fever (92.73%). Of those who purchased antibiotics, only 66.48% (117) completed the full course and 76.7% (135) used a previous prescription to make the purchase. Of those who used prior prescription, it was assessed that the same prescription was used more than 2 times by 72.6% (98) of the subjects. 11.93% (21) subjects who used antibiotics contracted adverse effects irrespective of the intensity. Among those who used Vitamins, only 1.62% (3) suffered adverse effect and among analgesic users, 15.03% (43) contracted side effects. About 310 (94%) students prefer self-medication to them and their family members. Knowledge from health magazines, internet, and books were major sources of self-medication. About 45% were using other system of medicine like Ayurveda as self-medication. Among the subjects, only 12.1% (38) were unaware that interactions could occur, 13.7% (43) were unaware of the hazards of increased dose and 36.1% (113) were unaware of the harm due to improper duration. 85.3% (267) of the participants who used self-medication believed that they were able to properly diagnose diseases and 67.29% (215) considered themselves to be capable of selecting a suitable regimen for therapy.

#### 4. DISCUSSION

In developing countries people are not only using non-prescription drugs but also prescription drugs, as self-medication products, without supervision.<sup>[8]</sup> Self-medication practices are very common among students in Malappuram district. Unfortunately, there are no data available regarding self-medication practices among the general public, which makes it difficult to compare the extent of self-medication among university students with those in the general public.<sup>[9]</sup> The intensity of the practise of self-medication a matter of embarrassment. MBBS and pharmacy student contributed a major portion of the study population. Pankaj Jain et al, showed that 21.5% of the actual drug users and 40.6% of the advocates of self-medication were students.<sup>[10]</sup> Cold, fever, headache and wounds were treated frequently with the suitable analgesics, antipyretics, antihistamines etc. according to them. The result obtained was found

to be similar to a study conducted in Ethiopia.<sup>[8]</sup> Vitamins were the most commonly used class of drugs.<sup>[8,10]</sup> The consumption of nasal decongestants was found to be similar in our study as well in a study conducted abroad.<sup>[9]</sup> Home remedies such as the application of tooth paste or honey on burned skin and normal saline for throat pain can be appreciated if it has been performed as a first aid before consulting a physician. Gastrointestinal symptoms (gastric pain, acidity, vomiting, diarrhoea) were another option that had been self-treated. Even sleeping pills were consumed illegally, the prevalence is not small and also expected due to high degree of stress in life of medical students.<sup>[11]</sup> The medical students not only prefer themselves in self-medicating, they also disseminated their drugs to their relatives, friends. Drug consumers were asked of their source of advice/information for self-medication. The knowledge procured for family, relatives and neighbours was a major inspiration for the student for self-medication however, a reduced rate was obtained from a study conducted in Haryana.<sup>[10]</sup> Social media and internet also lead to this trend. Whereas, doctors were the dominating source of information regarding drugs revealed for another study conducted by Rohit Varma.<sup>[12]</sup> The ease of accessibility and availability of the medicine had indulged them to such practises.<sup>[11]</sup> Major reasons of self-medication at student level were time saving, did not need advice from prescriber for minor illness, economic, fear from crowd at clinic.<sup>[12]</sup> This was one of another reason for self-medication. Most of the students had a trust in allopathic medicine system. The percentage of students favouring Ayurveda were low in contrast to studies in North India.<sup>[12]</sup> 90% of the drug consumers requested drugs by mentioning the specific name of the drug or drug product, which can be generic or brand. Interestingly, there are some familiar names of brand drug products that dominate over others, and 62.42% of the respondents requested drugs by mentioning the category of the drug to which it belongs. These categories of drug consumers/patients lend themselves to the care of the “pharmacist” in the community pharmacy. It is at this time that the pharmacy professionals have to demonstrate their abilities and expertise of drugs and their role as drug use educators and counsellors.<sup>[10]</sup> The rest, 72.6% were requesting drugs by showing an old sample or package of the drug product by presenting a piece of paper and by describing the physical characteristics such as the colour and/or shape of the drug product.

## 5. CONCLUSION

Self-medication is practiced by most medical professional course students. Re-orientation of the students to make them completely comprehend the risks and potential harms such as

antimicrobial resistance is to be performed and made part of the curriculum in the first year itself.

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