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Knowledge, Attitude and Practice on Self medication among Medical Students: : A Descriptive Cross-sectional Study

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ABSTRACT

Across the globe, people are increasingly turning to self-medication as a form of self-care. "Self-medication" refers to the practise of obtaining and using medication without a doctor's supervision. The purpose of this research was to examine the frequency and nature of self-medication among medical students, as well as the factors that contribute to this trend. With the help of a systemic random sample method and a tried-and-true semi-structured proforma, researchers were able to perform a cross-sectional descriptive study with 200 medical students. Statistical analysis was performed using Chi-square and odds ratio (OR): This cross-sectional study uses a stratified and proportional sampling strategy to recruit 840 students from a single university in Portugal. In addition to standard socio-demographic questions, a self-administered questionnaire probed respondents' levels of self-medication knowledge (a 14.488), attitudes toward self-medication (a 14.708), and self-medication practise patterns (a 14.445). Using t-tests and analysis of variance, we compared demographics and outcomes. Self-medication predictors were identified using a generalised linear model.

1. INTRODUCTION

Medication use for self-diagnosed illnesses is increasing across the world. "usage of medicines by a patient on his own initiative or on the recommendation of a nonprofessional or a lay person instead of obtaining guidance from a health care practitioner," as defined by

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the World Health Organization (WHO). 1 Self-medication medications, often known as "nonprescription" or "over the counter" medications, do not require a prescription and can be obtained from a pharmacy, an expired prescription, a friend or family member, or from one's own supply of medications.

Self-care has been a part of health care for a long time. Self-medication has both positive and negative effects, since it can be used to cure minor illnesses that don't warrant expensive medical attention, while also relieving stress on medical services, which is especially important in countries with a weak health care infrastructure. It's a more affordable option for those on lesser incomes. However, there are also major risks associated with self-medication that should be taken into consideration. For example, it can lead to unpleasant drug reactions, prolonged pain, and drug dependence, as well as waste resources and enhance the resistance of microorganisms.

The irrational use of pharmaceuticals is a major source of concern in the public and among experts. Prevalence rates are quite high all around the world, reaching as high as 68% in some European countries and as high as 92% in some Kuwaiti teenagers living in underdeveloped nations. The prevalence rates in Pakistan and Nepal, two of our closest neighbours, are 51 and 59 percent, respectively. Even though over 39% of medical students in India have admitted to self-medicating at least once, there have only been a handful of research on the topic. And the fact that the incidence rates are rising despite ongoing efforts to control the epidemic is deeply concerning. Among future doctors, it takes on added significance. Since drug and illness condition are not covered in the first year curriculum, first-year medical students are no different from the general population. However, students in their second year and beyond have enough opportunities to learn about the nuances of disease and medication. Since students' familiarity with medications and conditions evolves as they progress through medical school, drug prevalence and patterns of use change accordingly.

2. LITERATURE REVIEW

The term "self-medication" refers to when a person, either of their own will or at the advice of another, decides to use medication for the purpose of preventing, treating, or curing a condition about which the identity and severity are unknown (WHO, 2000a). Nonprescription or over-the-counter medication, as well as medication received from friends or family, may all be used in self-medication (Ocan et al., 2015). Nonprescription drugs are sold at a wider variety of locations than just pharmacies in some countries, such as Portugal (Martins et al., 2016).

The World Health Organization (WHO) recommends self-medication for treating self-recognized illnesses or symptoms, or for treating chronic or recurring diseases or symptoms, using pharmaceuticals prescribed by doctors (WHO, 2000a), making it apparent that self-medication does have a role in modern communities. At the same time, it highlights the importance of health education that takes a more instructional tack in regards to the proper use of OTC drugs (WHO, 2000a). This is due to the wide variety of possible adverse health effects associated with this behaviour, which change with the specific drugs involved and the individual's sensitivity to them. There are a wide variety of negative health outcomes that can

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result from drug abuse, including but not limited to: increased resistance to certain types of medication; decreased treatment efficacy due to inappropriate use; delayed proper diagnosis; severe medication side effects; toxicity; dangerous drug interactions; drug dependence; hypersensitivity to certain drugs; withdrawal symptoms from resistance; and many more (Bennadi, 2014; Hughes et al., 2001; WHO, 2000b). However, the World Health Organization (WHO) has highlighted that responsible self-medication does offer the benefit of avoiding and treating those diseases which do not require prior medical consultation and has the potential to give a cheaper alternative for treating common sickness (WHO, 2000a).

There is a growing trend toward the careless use of drugs, which is a public health hazard (Kasulkar& Gupta, 2015) in both developing and developed countries. Self-medication is a frequent practise around the world, with a few notable exceptions in North America and Northern Europe (Morgan et al., 2011). Several characteristics have shown a fairly consistent link with self-medication, even if the prevalence of this behaviour may vary from country to country (Carrasco-Garrido et al., 2014; Martins et al., 2002). Young age and high educational level are frequently contributing factors for the likelihood of engaging in self-medication, and studies show that the following are the primary reasons for the practise of self-medication: suffering from a mild illness, having previous experience in treating similar illnesses, economic conditions, the unavailability of healthcare professionals, and the generalised excessive accessibility and availability of over-the-counter medications (Martins et al., 2002).

There were 5,447 students enrolled in the first and third years of combined bachelor's and master's degree programmes for the 2018-2019 school year. The health sciences, any master's degree programme at any level, and any programme that didn't offer first- or third-year coursework were left out of the sample. Since previous research has shown that health science students generally have a higher level of knowledge when compared to students in other fields, we decided to exclude them from the current study (Xu et al., 2019).

A total of 592 participants were needed to conduct this study with a 95% chance of accuracy (based on the margin of error, confidence level, and distribution of responses). To do this, we conducted a stratified probabilistic sampling of college students according to their enrollment year and the field of study they were pursuing. We chose to categorise the various fields of study at the undergraduate and graduate levels into four groups: social and human sciences, legal and economic sciences, exact and natural sciences, and engineering sciences (using the definition provided and issued by the Foundation for Science and Technology).

3. METHODS

200 medical students were selected at random using a semi-structured proforma for the cross-sectional descriptive study. **3.1 Procedure and statistical analysis**

All children in the sample were administered the item in a classroom setting using paper and pencil after providing informed consent. When all students who agreed to participate in the study were counted, 873 questionnaires were distributed. Poorly completed or returned questionnaires (a total of 33) were disregarded in our analysis (or answered in incomplete terms). The response rate was 96.2% (95% confidence interval [CI]: 94.8-97.6). The university ethics committee approved the research, and all human subjects protocols outlined

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by Christensen et al. (2015) were adhered to. IBM's Statistical Package for the Social Sciences (SPSS) version 26.0 was utilised for data analysis (Armonk, NY, USA). The demographic factors and test questions were subjected to descriptive analysis. Cronbach's alpha was used to analyse the internal consistency of the scales in order to better understand their psychometric properties (a). The average scores on a series of questions measuring participants' familiarity with and acceptance of self-medication were calculated, and then compared across various subgroups of respondents using the most relevant statistical tests. For dichotomous variables, we used an independent samples t-test; for continuous variables, we utilised analysis of variance (ANOVA); and for multiple comparisons, we used Bonferroni's correction. Using Pearson's correlation, we determined the relationships and interactions between the study's findings. At last, we determined a generalised linear model to define and identify the predictive variables and factors involved in the chance of engaging in self-medication activities. We have used the socioeconomic variables that revealed statistically significant variations in self-medicating behaviours to derive this model's parameters. We provide both the betas (b) and their associated 95% CIs. Except for multiple comparisons across groups, where the Bonferroni correction was used, a p-value of.05 or less was considered statistically significant.

4. RESULTS

Table 1: Socio-demographic characteristics of study population (n=200).

Characteristic	Number	Percentage (%)
Age (years)$^{+}$		
≤18	25	12.5
19-21	41	20.5
22-24	134	66.5
Sex*		
Male	93	46.5
Female	107	53.5
Year of study$^{£}$		
First year	43	21.5
Second year	66	33.0
Final year	91	45.5

$^{+}X^2=28.47$; df=2; $p<0.001$, $*X^2=1.96$; df=1; $p>0.05$, $^{£}X^2=16.32$; df=2; $p<0.05$.

Table 2: Pattern of self-medication.

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Characteristic	Number	Percentages (%)
Self-medication (n=200)		
Yes	186	93
No	14	7
Frequency of self-medication (n=186)		
Once in a week	14	7.5
Fortnight	17	9.2
Once in a month	24	12.9
Rarely	131	70.4
Drug type for self-medication		
Ayurveda	31	16.6
Allopathy	177	95.2
Homeopathy	27	14.5
Unani	5	2.7
Reason for self-medication		
Time saving	61	32.8
Quick relief among common illnesses	96	51.6
Economical	49	26.3
Previous experience	80	43.0
Mild illness	68	36.6
Long waiting time in the clinic	12	6.5

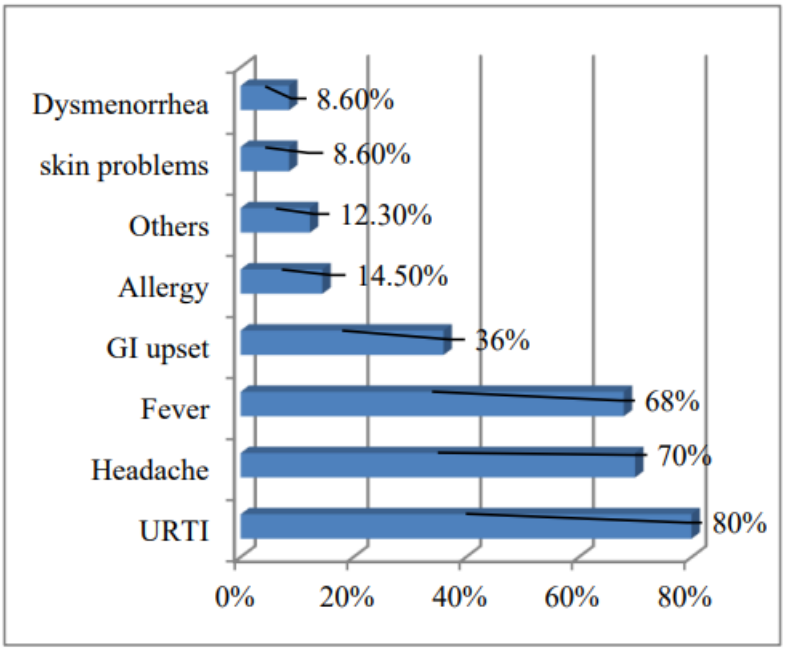

Figure 1 shows that over eight in ten students used over-the-counter drugs to treat an upper respiratory tract infection, followed by 70% treating a headache, 67% treating a fever, and 36% treating a stomachache.

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Table 3: Distribution of study population according to commonly used drugs for self-medication (n=186).

Drug	Number	Percentages (%)
Paracetamol	156	78
NSAIDs	101	50.5
Cough syrups	103	51.5
Antibiotics	43	21.5
Multi-vitamins	39	19.5
Topical agents	22	11
Anti-ulcer agents	36	18
Anti-spasmodic	8	4
Anti-emetics	24	12
Laxatives	5	2.5
Anti-diarrheal	32	16
Others	9	4.5

CONCLUSIONS

Students in Portuguese universities were found to have high rates of self-medicating in a recent cross-sectional survey. Despite a generally positive outlook, research has indicated that self-medication knowledge is low. Female students, those in the scientific field of engineering sciences, and those with very negative opinions regarding self-medication are more likely to be included in the research sample's self-medication population.

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