

## Original article

# Assessing Self-Medication Practices: A Cross-Sectional Study on Implications and Challenges

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## ABSTRACT

**Aim and Background:** The survey aimed to explore and understand the perceptions and attitudes of individuals towards self-medication, and to examine the extent to which they engage in self-medication practices. The survey gathered data on the reasons why individuals choose to self-medicate, the types of medications they use, the sources of information they rely on, and their awareness of the potential risks and benefits of self-medication. **Methodology:** A total of 120 subjects participated in the study, and the majority of respondents belonged to the age group of 18-20 and 21-25. Among the respondents, 68.5% of them were female, and 51.4% of respondents belonged to healthcare professions/students. **Result:** When asked about their preference for self-medication, 76.6% of the respondents preferred self-medication, and the majority of respondents (47.7%) opted to self-medicate sometimes. The principal morbidities for which respondents seek self-medication are headache (35.1%), fever, and cold (31.3%). The most commonly used medication for self-medication was analgesics and antipyretics (30.3%) and cough and cold preparations (27%). Results of the survey showed that while self-medication is a preferred mode of treatment for many individuals, most of them were unaware of the potential risks associated with self-medication. **Conclusion:** The findings of this study highlight the need for public health interventions aimed at promoting safe and effective medication use.

**Key Words:** Self-medication, Prevalence, Health outcomes, Medication use, Survey.

Self-medication, the practice of obtaining and using medicines without a prescription or professional medical guidance, has become a prevalent phenomenon with both potential benefits and risks [1]. As noted by the World Health Organization (WHO), responsible self-medication can serve as a valuable tool in preventing and treating certain diseases, offering a convenient and cost-effective alternative for managing common illnesses. This nuanced approach acknowledges the positive aspects of self-medication while recognizing the need for caution in its application [2]. The prevalence of self-medication, notably in developing nations like India, underscores its significance as a primary healthcare strategy, especially in the absence of universal healthcare access [3]. Globally, self-medication rates range from 11.2% to 93.7%, with studies in India revealing rates as high as 37% in urban areas and 17% in rural regions [4-9]. This widespread reliance on drugs without professional consultation poses significant risks, motivating a focused

study on self-medication practices [10]. The percentage of people using self-medication worldwide is shown in (Figure 1) [11].

The appeal of self-medication lies in its inherent convenience, a key factor influencing individuals to address minor health concerns without the necessity of a doctor's visit [12]. In today's fast-paced world, where time is often a precious commodity, the allure of quick and accessible solutions to health issues is undeniable. Additionally, the cost-effectiveness of self-medication further contributes to its popularity, as over-the-counter medications and home remedies can often provide relief without the financial burden associated with doctor visits and prescription drugs. The time-saving aspect of self-medication is evident in its elimination of the need for scheduling appointments, waiting in clinics, and adhering to the timelines of the traditional healthcare system [13]. Particularly for minor ailments and well-known conditions, individuals may prefer the autonomy and immediacy that self-medication offers. However, amidst these apparent advantages, it is crucial to acknowledge and address the potential drawbacks associated with this practice [14].

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Studies have consistently indicated that self-medication may lead to delayed diagnosis and treatment of underlying health conditions. The absence of professional Notwithstanding these apparent benefits, it is imperative to recognize and manage any possible disadvantages linked to this approach [14]. Research has consistently shown that self-medication may cause underlying medical issues to be diagnosed and treated later than they otherwise would. Medical assessment can result in overlooking serious issues that require timely intervention [13]. Furthermore, self-medication poses the risk of interactions between different drugs, emphasizing the importance of seeking guidance from a licensed medical practitioner to mitigate potential risks and ensure the safety and efficacy of the chosen treatment. A notable concern associated with self-medication is the looming threat of antibiotic resistance [15].

A major threat to public health is the emergence of drug-resistant bacterial strains, which are a result of the careless use of antibiotics without appropriate medical supervision. It is imperative to address this expanding problem and maintain the efficacy of these drugs to practice responsible antibiotic usage under the supervision of medical specialists [15,16]. This study delves into self-medication trends, scrutinizing factors and attitudes. By uncovering the nuances, it aims to guide health initiatives and policies for a balanced approach to medication use, considering both accessibility and responsible practices for individual and public well-being.

Self-Medication Rates in Selected Countries

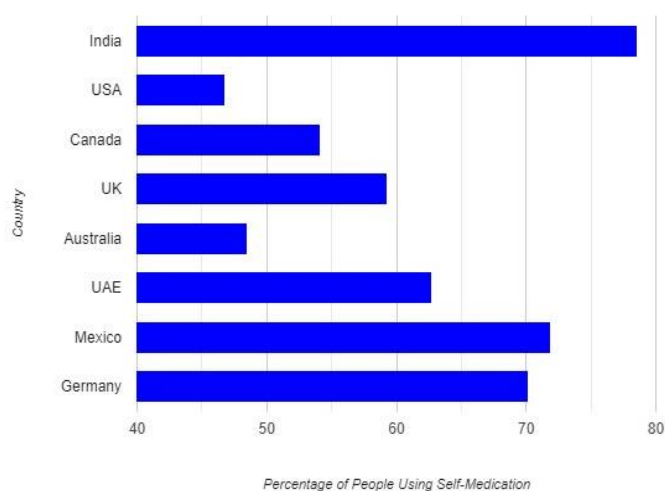


Figure 1: Percentage of people using self-medication worldwide.

## METHODOLOGY

In conducting this cross-sectional study within the community, we selected Srinivas College of Pharmacy in Valachil, Mangalore, as our study site. The research involved a sample size of 120 subjects and spanned 2-5 days. Our inclusive criteria encompassed individuals above 18 years of age, comprising both healthcare professionals/students and

non-healthcare professionals/students who willingly participated in the study. This diversity in participants aimed to provide a comprehensive understanding of self-medication practices. On the contrary, individuals who did not return the questionnaire within the stipulated time and those unwilling to participate were excluded.

**Data Source:** For the collection of data in this self-medication study, an online survey was employed, utilizing a meticulously crafted questionnaire created through Google Forms. The design of the questionnaire drew inspiration from existing literature and research on self-medication, garnering insights from reputable sources such as Google Scholar and other reliable online databases. This method ensured the incorporation of established knowledge and best practices into the survey instrument, enhancing its validity and relevance. The utilization of Google Forms facilitated efficient data gathering, allowing participants to provide their responses in a user-friendly digital format.

**Data Collection:** To ensure a diverse and widespread representation, the survey for this study on self-medication was disseminated across various online platforms, including social media, online forums, and email lists. This approach aimed to engage a broad spectrum of respondents, capturing diverse perspectives on self-medication practices. The questionnaire, designed to extract comprehensive insights, focused on gathering data about the perceptions and attitudes of individuals towards self-medication. Key aspects explored included the reasons driving self-medication, the types of medications commonly used, sources of information influencing these choices, and awareness of potential risks and benefits of participants associated with self-medication. A total of 120 subjects actively participated in the study, contributing their responses anonymously to prioritize and uphold privacy and confidentiality. This approach not only encouraged candid feedback but also ensured the ethical handling of sensitive information.

**Data Analysis:** The collected data underwent a thorough analysis employing statistical tools, with descriptive statistics like percentages and frequencies summarizing key demographic characteristics, including age, gender, and profession of the 120 study participants. Detailed scrutiny of preferences for self-medication, types of medications used, and reasons driving self-medication revealed underlying patterns. The findings were then interpreted and presented visually using pie charts and graphs, offering a clear and accessible representation of prevalent self-medication practices.

## RESULT

The survey, facilitated through a structured questionnaire, provided valuable insights into the characteristics and

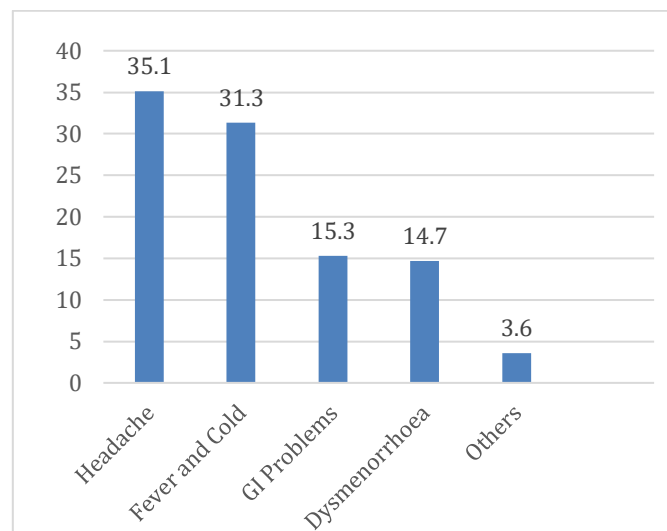
preferences of the respondents. The age distribution revealed a predominant representation within the 18-20 and 21-25 age brackets, signifying a predominantly youthful demographic engaged in the study. In terms of gender, the survey exhibited a slight gender imbalance, with 68.5% of respondents identifying as female and 31.5% as male, reflecting varied participation across genders. A notable aspect of the participant demographics was the professional and educational affiliations. Approximately 51.4% of respondents were affiliated with healthcare professions or were students in related fields, while the remaining participants belonged to non-healthcare professions or were students from other disciplines. This stratification provided a nuanced understanding of the diverse backgrounds contributing to the survey. The survey delved into the respondent's attitudes towards self-medication, revealing a substantial inclination towards this healthcare approach. A significant 76.6% of participants expressed a preference for self-medication, emphasizing the popularity of this practice within the surveyed population. Further exploration into the frequency of self-medication uncovered intriguing patterns. The majority, comprising 47.7% of respondents, indicated a preference for self-medicating "Sometimes," while 39.6% chose the option "Rarely." Notably, a small yet consistent percentage of 3.7% revealed a persistent preference, selecting "Always" when it comes to practicing self-medication as shown in (Table 1).

**Table 1: Distribution of the study subjects according to sociodemographic profile**

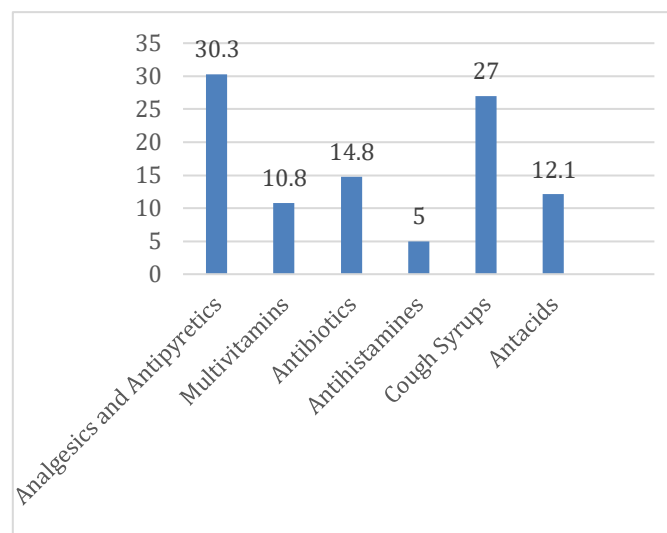
Distribution of the study subjects according to sociodemographic profile		
		%
<b>Age group</b>	18-20	63.1%
	21-25	21.6%
	26-40	8.1%
	Above 40	7.2%
<b>Sex</b>	Female	68.5%
	Male	31.5%
<b>Stream</b>	Health Care	51.4%
	Non-Health Care	48.6%
<b>Preference to self-medication</b>	Yes	76.6%
	No	23.4%
<b>Frequency of self-medication</b>	Always	3.7%
	Sometimes	47.7%
	Rarely	39.6%
	Never	9%

Principal Morbidities for which the respondents seek self-medication are Headache (35.1%), Fever&Cold (31.3%), GI Problems (15.3%), and Dysmenorrhea (14.7%) as shown in (Figure 2). Drugs commonly used for self-medication included Analgesics and Antipyretics (30.3%) and Cough Suppressants/Syrups (27%) followed by Antibiotics (14.8%), Antacids (12.1%), Multivitamins (10.8%), and Anti-Histamines for Allergies (5%)A shown in (Figure 3). 18% of the total respondents have experienced side effects as a result of self-medication. Among these 18% of the respondents, the majority of them have experienced Dizziness (28.7%). Other

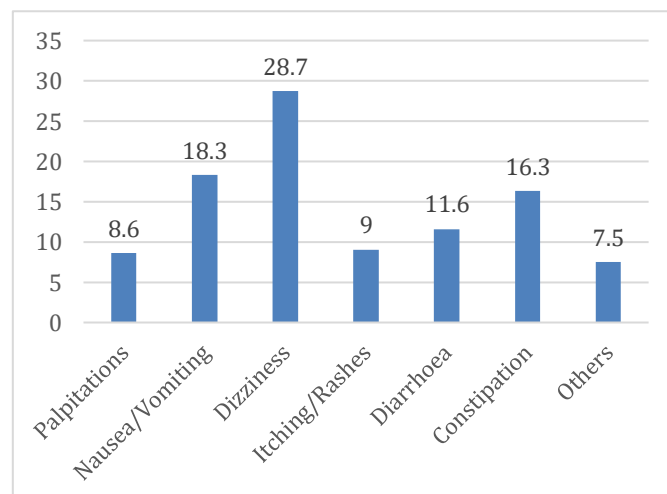
side effects experienced were Nausea/ Vomiting (18.3%), Constipation (16.3%), diarrhea (11.6%), Itching/Rashes (9%), and Palpitations (8.6%) as shown in (Figure 4).



**Figure 2: Principal morbidities for seeking self-medication.**



**Figure 3: Drugs used by respondents for self-medication.**



**Figure 4: Side Effects experienced by Respondents as a Result of Self-medication**

About the sources of medicines for self-medication, 61% of the respondents got them from medical stores, 20% of them used left over medicines found at home, 13% of them get the medicines from families and friends and 6% of them shop from online pharmacies as shown in (Figure 5). When the attitude of the respondents was analyzed, we got to know that 31% of the respondent's considered self-medication as a "Friend" and 6% of the respondent's considered self-medication as a "Foe", while majority of them (63%) considered self-medication both- A Friend and A Foe as shown in (Figure 6). When the questionnaire was analyzed, the respondents agreed with various reasons that were against

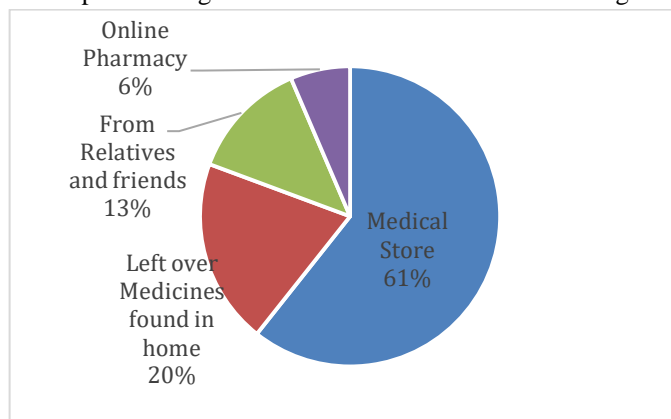


Figure 5: Source of Medicines for Self-medication

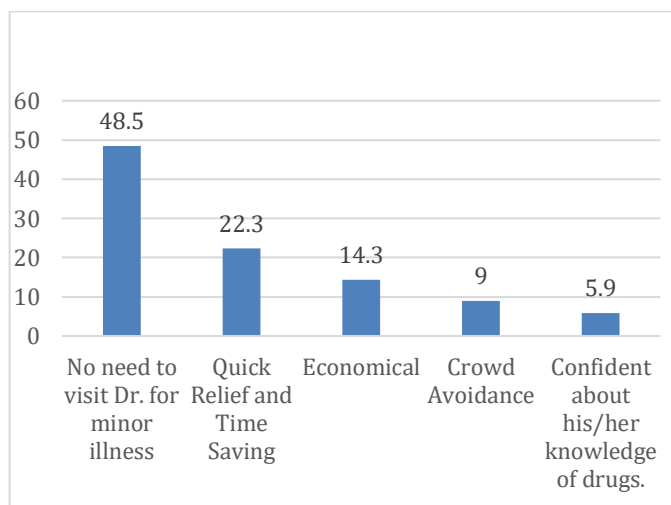


Figure 7: Why do respondents think Self-medication is a friend?

## DISCUSSION

Several comparative studies have been conducted on the prevalence of self-medication in different countries. A study conducted in Puducherry, India, reported a high prevalence of self-medication among illiterate and middle school-educated individuals [17]. Another study conducted in Bangalore, India, found that the practice of self-medication differed among individuals and was influenced by several factors like age, educational status, gender, family monthly income, level of knowledge, and attitude [18]. A systematic review and meta-analysis of studies conducted worldwide found that the prevalence of self-medication in university students was high

and in favor of self-medication. Among the reasons in favor of self-medication, the most favored reasons were No Need to Visit the Doctors for Minor Illness (48.5%), Time Saving and Quick Relief (22.3%), Economical (14.3%), Crowd Avoidance (9%) and 5.9% of them feel that they are confident about his/her knowledge on the medicines as shown in (Figure 7). When the reasons against self-medication were assessed, the most important reason were Risk for Adverse Effects (30%), Lack of knowledge about the drugs (23.5%), Risk of Using Wrong Drugs or Using drugs Wrongly (18.1%), Risk of Drug Dependence (16.6%) and Risk of Misdiagnosing (11.7%) as shown in (Figure 8).

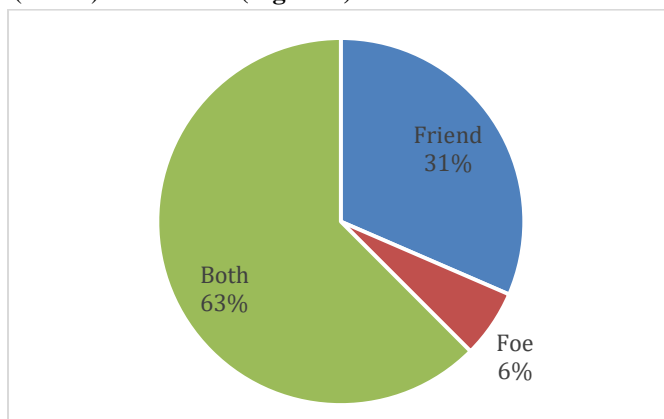


Figure 6: Respondent's Point of View Regarding Self-Medication

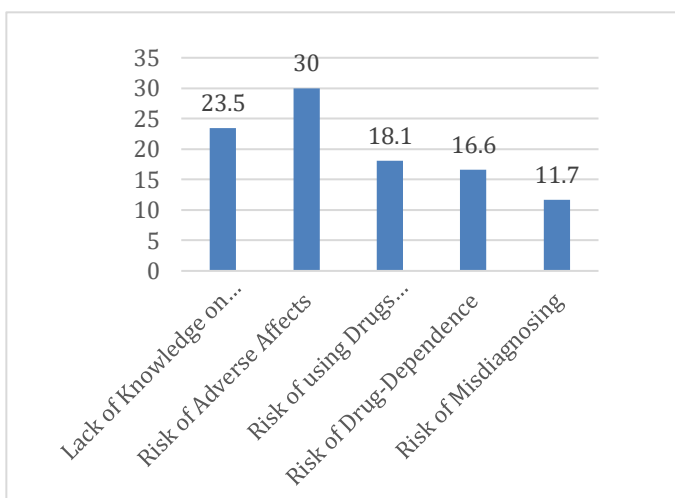


Figure 8: Why do Respondents think Self-Medication is a Foe?

[19]. A study conducted in metropolitan areas of Thailand reported a self-medication prevalence rate of 88.2% [20]. The pervasive prevalence of self-medication, notably among the youth, underscores the urgent need for targeted health education [21]. Gender and professional diversity reveal varied perspectives influencing self-medication practices, with common health concerns apparent, but the diverse array of drugs used raises concerns about informed decision-making and the high prevalence of side effects, particularly dizziness [22-24]. The reliance on medical stores and leftover medicines signals the accessibility of medications, urging regulatory scrutiny. The nuanced perception of self-medication as both a "Friend" and a "Foe" underscores the importance of balanced



healthcare approaches. While convenience and cost-effectiveness drive self-medication, contrasting concerns about adverse effects and misdiagnosis highlight the imperative for responsible medication practices. This study emphasizes the need for targeted education, regulatory measures, and future research exploring underlying factors to promote responsible self-care practices, with the potential of digital health interventions playing a pivotal role in improving overall public health outcomes.

## CONCLUSION

Prevalence of self-medication is high in the educated youth, despite the majority being aware of its harmful effects. Strict policies need to be implemented on the advertising and selling of medications without prescription to prevent this problem. Education to help people to decide the appropriateness of self-medication is required as responsible self-medication can prevent and treat diseases that do not require medical consultation and provide cheaper alternatives. Though self-medication is a convenient alternative, its inappropriate practice may cause detritus effects on health.

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