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Self-medication practices and perceived associated health implications: a review

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ABSTRACT

Self-medication – defined as the use of pharmaceutical products without a formal prescription from a licensed healthcare provider – is a globally prevalent practice, particularly in developing countries where medications are more readily accessible and healthcare costs remain prohibitive. This behaviour includes the consumption of over-the-counter (OTC) drugs, the reuse of previously prescribed medications, and the sharing of pharmaceuticals among family members. Although self-medication offers certain advantages, such as economic feasibility, ease of access, and perceived autonomy, it simultaneously poses significant health risks. These include misdiagnosis, potential drug-drug interactions (DDIs), and the development of antimicrobial resistance (AMR), especially in the context of inappropriate antibiotic use. The prevalence of self-medication is notably high in South Asian countries, driven by factors such as prior personal health experiences and pervasive pharmaceutical marketing strategies. Commonly used medications in this context include analgesics and antibiotics, often employed in order to treat minor ailments such as upper respiratory tract infections and cephalalgia. Despite its utility in managing non-serious health conditions, improper self-medication – particularly involving antibiotics – can lead to severe consequences, including AMR and adverse drug reactions. DDIs may further exacerbate these risks, potentially resulting in critical outcomes such as renal impairment. In order to mitigate these threats, it is imperative to strengthen patient education, advocate for the judicious use of OTC medications, and enhance public awareness regarding the risks associated with unsupervised pharmaceutical consumption.

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1. Introduction

Self-medication refers to the administration of pharmacological agents in order to address health conditions without confirmation or guidance from a licensed medical professional. Common ailments managed through self-medication include fever, bodily discomfort, dyspepsia, and diarrhoea[1]. The World Health Organization (WHO) defines self-medication as the use of over-the-counter (OTC) pharmaceuticals for self-diagnosed symptoms or the continued consumption of previously prescribed medications for recurrent health issues. This definition highlights the widespread nature of self-medication practices globally[2].

Beyond the procurement of pharmaceuticals without a valid prescription, self-medication is often embedded in cultural norms, such as the reuse of previously issued prescriptions to obtain medications or the sharing of medicinal products among family members, relatives, and acquaintances[3]. The phenomenon is prevalent in both developed and developing countries, with a notably higher incidence in the latter, largely due to the increased availability of pharmaceuticals without prescription requirements[1].

At Damascus Hospital, self-medication is commonly practiced, with a reported prevalence of 67.3% over the preceding three-month period. Table 1 presents prevalence data across different countries / regions. Variations in recall periods, access to healthcare services, economic conditions, and sociocultural factors may account for differences in prevalence rates[4]. This review aims to provide a comprehensive overview of self-medication practices, including prevalence, underlying motivations, commonly used medications, and associated risks.

2. Reasons for self-medication

The utilization of self-medication is influenced by multiple factors, including rising healthcare costs and the increasing burden of chronic illnesses. Key determinants contributing to its prevalence include enhanced accessibility to pharmaceutical products, prior personal experiences with similar health conditions, aggressive marketing of medicinal products, and the belief that minor ailments do not warrant professional medical intervention. These factors are particularly pronounced in South Asian countries[2].

3. Benefits of self-medication

Self-medication offers several potential benefits to healthcare systems. It facilitates a more efficient use of clinical resources, improves access to pharmaceuticals, and may contribute to reducing expenditures associated with prescribed medications under publicly funded health programs[5].

4. Risks of self-medication

The risk of inappropriate self-medication is elevated among individuals with limited health literacy. Accordingly, it is essential to assess community-level knowledge regarding the use of OTC medications[6]. During the COVID-19 pandemic, self-medication practices surged, partly due to the widespread distribution of the so-called “COVID-kit”; a collection of pharmaceuticals promoted as early treatment options.

Health education initiatives are critical to informing the public about the dangers of self-medication. Although OTC medications are intended for self-administration and have demonstrated efficacy and safety, misuse stemming from inadequate understanding of dosage, side effects, and drug interactions can lead to serious consequences. Vulnerable populations (including children, older adults, and individuals in special physiological states such as pregnancy) are particularly at risk[6].

Globally, the rise in self-medication is concerning and represents a major contributor to the development of antimicrobial resistance in microbial populations. Public education must address the misuse of antibiotics, including their use for minor conditions such as pharyngitis, premature discontinuation of treatment upon symptom relief, and unsupervised modification of antibiotic regimens[7].

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Table 1. Prevalence of self-medication among different countries / regions.

Country / region	Self-medication prevalence
Jordan	42.5%
Egypt	73%
Lebanon	79.1%
Brazil	16.1%
Vietnam	83.3%
Pakistan	84.4%
Ethiopia	50.2%
Palestine	87%

Self-medication also poses significant health risks through drug-drug interactions (DDIs), which may result in adverse drug reactions (ADRs). A detailed analysis identified 153 DDIs, with 59.5% classified as pharmacodynamic interactions. Of the 119 pharmaceuticals involved, 51% were prescription-only medications. Frequently used drug categories included analgesics, anti-inflammatory agents, dietary supplements, and antibiotics. The most commonly reported ADRs involved haemostatic disorders and renal dysfunction. These findings underscore the potential severity of self-medication-related complications, exacerbated by insufficient information provided in medication package leaflets[8].

Headache, influenza, and cough were the three most frequently cited reasons for self-medication. Survey data have revealed that 40% of students believed self-medication could be recommended to or received from others. Furthermore, 94% agreed that self-medication requires monitoring, and nearly half expressed comfort with its use[9].

5. Conclusion

Self-medication is a complex phenomenon encompassing both beneficial and harmful dimensions. While it may serve as a convenient and cost-effective alternative to formal healthcare, its improper use can lead to serious health consequences.

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Conflicts of interest

None exist.

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