# Self-medication practice in low income countries

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**ABSTRACT:**
*The low income countries are having a number of issues related to public health. One such very important issue is the practice of self-medication which is prevalent in such countries. There are multiple factors present in these countries that have led to widespread self-medication. The present article highlights this grave problem prevalent in the low income countries.*

**Keywords:** *Healthcare information to all by 2015, Low income countries, Non-prescription drugs, Prescription drugs, Self-medication.*

## INTRODUCTION

The low income countries are facing a number of problems. The burden of diseases is very high and proper medical facilities are lacking resulting in self-medication for most of the illnesses [1-3]. Self-medication refers to using drugs that have not been prescribed, recommended or controlled by a licensed health care specialist [4]. It has also been defined as the use of nonprescription medicines by people on their own initiative [5]. In low income countries both non-prescription and prescription drugs are widely used, without any supervision [6]. Also, the self-medication practice is common in youths [6]. Various previous studies have reported the extent of self-medication to be as high as 45-98% in various countries [6-12].

It is evident that the major contributors to self-medication in economically weaker countries were low severity of symptoms and financial inaccessibility [6]. Also, one of the main reasons is the easy availability of over the counter drugs without medical prescription. In such scenario, self-medication provides a cheaper substitute for those who cannot afford the cost of clinical service [2]. A study from Nepal reported that, the poor socioeconomic status, the high cost of medicines, lack of availability of physicians in rural areas, and difficulties in accessing modern healthcare were the major factors for self-medication [13]. Thus, the pharmacy shops frequently served as the local public's first point of contact with the healthcare system [13,14]. In a study in Ethiopia, 72% of the individuals reported that they obtained drugs from a pharmacy or drug shops thus indicating that they had obtained drug-related information from the dispensers like pharmacists [2].

In India, the situation is no different, the pharmacists and pharmacy attendants play an active role in fostering self-medication among the local public [13,15]. The Indian pharmaceutical industry stands fourth in terms of volume and thirteenth in terms of value globally; exports ceiling to approximately 2.6 billion USD, and the domestic sales reaching the heights of about 4 million USD [6,16]. There are about 200 different brands for every drug molecule in India [17]. This abundance of drugs has led to fierce competition among drug companies and this has ultimately led to the controlled price of medicines, thereby resulting in extremely cheap and affordable drugs as compared to rest of the world [6]. This has also resulted in marked increase in unethical marketing practices, leading to uncontrolled availability [6]. Besides this, the poor and weak regulatory laws increases the chances of self-medication and drug abuse [6,18]. Reports claim that the combination preparations containing 'hidden' categories of drugs and food supplements or tonics of doubtful value were commonly used in India [19]. Similar results are reported from other low income countries [20,21].

Consequently, the aberrant use of drugs for self-medication has not only led to hazardous health conditions, but also the development of resistant microbial strains [22]. As previously reported, self-care orientation, cost-effectiveness, time factor and easily accessible medical knowledge are some of the most important factors encouraging the practice of self-medication [7,23].

Self-medication has also been defined as obtaining and consuming drugs without the advice of a physician, either for diagnosis, prescription or surveillance of treatment [13,24]. The prescription of medicines by non-qualified persons is quiet common in low income countries [1,3,13]. The drugs like Paracetamol and analgesics were the most commonly used class of drugs, as reported in earlier reports in the medical literature [25,26]. Besides, analgesics, antimalarial, antibiotics and cough syrups, among others are highly abused as self-medications[27].

Also, in developing countries antimicrobials are commonly sold drugs [28].

A number of studies done in the past reported that the rise in self-medication was attributed to a number of important and controllable factors. The main contributors could be related to lifestyle, socioeconomic factors, easy access to drugs, the increased potential and predilection to treat or manage certain illnesses through self-care, and greater availability of medicinal products [29]. Prior experience of self-medication and non-seriousness of the illness are the two important reasons for self-medication. The low severity of symptoms of illness is frequently reported in literature [2]. Thus, the factors leading to self-treatment include age and gender, patient satisfaction with the healthcare provider, the price of the drugs, educational level, and socio-economic factors [30]. Decreased health car budget may be an alarming reason in developing countries. Interactions between prescribed drugs and the drugs taken for self-medication is an important risk factor of which health care providers must be aware of [24,30]. However, this is difficult to reconcile with the fact that economic reasons were commonly cited for self-medication. The greater prevalence of self-medication among the youths could well be due to the better educational level or accessibility to internet [13]. Thus, perception of illness and incessant advertising, among others, has increased the spread of self-medication accounting for about 2.9 - 3.7 % causes of death in hospitals due to drug-drug interactions [31-37]. However, it has also been reportedthat drug use is influenced by the socio-demographic profile of the drug consumers such as gender, morbidity, age, attitudes about life and health, stress, and social roles but has nothing to do with education and ethnicity [38-40].

A study conducted in the southern part of Ethiopia showed that 15% of the persons with perceived illnesses practiced self-medication [41]. In another study conducted in Addis Ababa and central Ethiopia, the magnitude of self-medication was as high as 50% [42]. The study carried out in North West Ethiopia in Gondar, Dabark, and Kola-Diba areas showed prevalence of 27.2% self-medication practice [43]. The headache and fever were the most commonly reported symptoms in the two-month period prior to the study that led to self-medication, followed by cough and the common cold. However, the most prevalent symptoms reported in the previous study in North West Ethiopia were cough and cold followed by fever and headache [43].

In the study in Ethiopia NSAIDs were the most commonly abused drugs [2]. This study also reported that the antimicrobialswere not abused for self-medication extensively and were obtained mostly by prescription; also it was relatively low as compared to the prevalence of antibiotics used in the Nepal study [13]. In a study in Kenya, the most commonly used pharmaceuticals were antimalarial drugs (mainly Chloroquine), painkillers and antipyretics (mainly Aspirin and Paracetamol), which were stocked in most small shops in the village at low prices and readily sold to children [1]. A study from Southern Chile, reported that the group of medications most requested was nonsteroidal anti-inflammatory drugs (NSAIDs) (33%), with Diclofenac sodium being the most used (14%) [4]. Earlier reports from a study from the Nigeria showed that the commonest groups of medication prone to self–medication include antimalarials and antibiotics [44].

The indiscriminate use of drugs as self-medication has various harmful effects. The increased intake of analgesics/NSAIDS may lead to adverse hepatic, renal and gastrointestinal effects [45,46]. The ongoing trend of irrational antibiotic usage already has, and may further lead to the development of anti-microbial resistant strains [47-51]. The unrestricted accessibility to most prescription-only drugs may lead to adverse drug reactions resulting in morbidity and mortality [6]. Besides, the stored drugs could also lead to accidental drug poisoning [6]. The effects like antibiotic resistance could be worse in immune-compromised individuals [39,50,52,53]. The improper disposal of stored drugs has adverse effects on the environment [54-56]. The lack of compulsory information about medicines and the side effects due to its abuse shakes the basics of medication safety guidelines [6].

## CONCLUSIONS

Although it is recommended to improve the self-care orientation, but the lack of knowledge about rational drug usage and uncontrolled availability of drugs have led to numerous healthcare issues. There is an urgent requirement to control the drugs available in the market. Strict laws, control over misguiding advertisements, healthcare education to all is imperative. The use of drugs as self-medication is mostly due to the dependence on the unreliable sources, like advices from friends and roommates and previous prescriptions. There is a fraction of consumers that followed the reliable set of medical information sources like journals (19.33%) and the internet (11.33%) about the drugs. There should be a strict review of the films advertising medicinal products and the websites supplying medication knowledge [6]. The universal access to health related information for health professionals and caregivers is a building block for meeting the Millennium Development Goals and achieving health for all [57]. The grave problem of self-medication is prevailing in low income countries and can be controlled by involvement of all stakeholders, including Governments, communities, consumers, care givers,

NGO's and pharmaceutical companies. Besides, the non-profit organizations like Healthcare information to all by 2015 (HIFA2015) have to play an important role in curtailing the problem of self-medication [58]. As proper knowledge about drugs and the associated adverse effects is essential for the communities and the healthcare providers. This will also prevent the mortality and morbidity due to irrational self-medication of drugs. Thus, the roles of public and private companies are very important for the successful building of a nation, free of lack of knowledge about healthcare, leading to practices like self-medication [59].

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