

Self-medication and its Impact on Human Health



Muhammad Abubakar¹, Muhammad-Maaz Arif², Muhammad Rafique Khan¹, Muniba Urooj³

Abstract

The purpose of this paper was to examine the trend of self-medication, evaluating its use, drawbacks and motivations behind its use. People were questioned about their background and conditions for which they used drugs/medicines in several studies. Complicated lifestyles, hectic routines, cultural norms, expensive medication, over-confidence, lack of education, selling non-prescriptive pharmaceuticals, and the absence of government checks contribute to the trend of self-medication. People largely relied on self-diagnosis and only went to professional doctors when they had serious problems. Over-the-counter medications were preferred for basic ailments such as fever, headache, flu, etc. People with greater education were more likely to self-medicate because they relied on their own expertise and had easy access to the drug markets. The countermeasures for self-medication involve the services of Professionals and Pharmacists, promoting the responsible use of self-medication and spreading awareness about its risks are the key steps to reduce adverse impacts of self-medication.

Keywords: Self-medication, Drugs, Medicines, Over-the-counter medications, adverse impacts.

¹ University of the Punjab, Lahore, Pakistan

² University of Health Sciences, Lahore, Pakistan

³ North University of China, China

Correspondence:

Muhammad-Maaz Arif
maazaributt@gmail.com

Introduction

Self-medication may be defined as the consumption or use of drugs to treat self-diagnosed disorders or symptoms or the intermittent or continued use of drugs for chronic or recurrent disease or symptom (1). It may also be defined as the practice of treating illnesses and disorders with medications that are licensed and available without a prescription and are safe and effective when taken directly. It is necessary that the medications used be of established safe, reliable, and effective, and that they be used for self-recognizable conditions with suitable doses. It includes obtaining drugs without a prescription, using an existing prescription to purchase new medicines, sharing medicines with friends, relatives, or others in one's social circle, or using medicines left over at home. Inappropriate usage of medications, such as antibiotics, can result in negative outcomes such as treatment failure, drug toxicity, or antibiotic resistance (2). As seen in Table 1, self-medication offers both potential benefits and risks (3).

In 1970, The World Federation of Proprietary Medicine Manufacturers Association emphasized the classification of medicines into two categories, prescribed and non-prescribed. The first

international symposium, held in 1975 at European Regional Offices, emphasized self-care. In 1977, the World Health Assembly passed a resolution proclaiming "health for all." The World Medical Association emphasized personal responsibility for one's own health in 1981. In 1986, the "Ottawa Charter for Health Care" emphasized self-care (3, 4). According to the reports, a variety of factors influence adolescents' self-medication behavior. Overconfidence in pharmaceutical expertise, a positive attitude towards self-care encourage people to self-medication practices and substance abuse is also a factor. These medications are obtained through outdated prescriptions, without a prescription, and some are provided by a friend. When these over the counter or prescription-only medications are freely accessible, and expose them to unnecessary hazards. Several studies on self-medication and adolescent behavior towards it have been conducted in various parts of the world (5, 6). The study's goal is to learn more about adolescent self-medication behavior; over the counter and prescription-only medications used, factors promoting/facilitating self-care, self-medicated health complaints; sources of information about drugs, their benefits and risks, and adverse events encountered.

Table 1: Potential benefits and risks of self-medication

Potential Benefits		Potential risks
Individual level	Community Level	
<ul style="list-style-type: none"> • Active role in one's own health care • Self-reliance in preventing minor symptoms • Education opportunities on specific health issues • Economical 	<ul style="list-style-type: none"> • Scarce medical resources are saved from being wasted on minor situations • Lowering cost of community funded health program • Reduced absenteeism from work • Reduced pressure on medical services • Health care availability enhanced 	<ul style="list-style-type: none"> • Incorrect self-diagnose • Incorrect choice of therapy • Rare but severe adverse effects • Inadequate or excessive dosage • Risk of dependence • Food and drug interaction

Methodology

From the year 2000 to the present, the author reviewed the literature on self-medication. The studies selected were mainly original articles based on primary data. The databases used for searching manuscripts were Google Scholar and Pubmed.

Results

Self-care, Lifestyle and adapting patterns

Smoking, alcohol consumption, diet, sleeping habits, exercise, and hobbies are examples of lifestyle practices (7). People's adaptation to functional limits includes home environmental alterations and the use of gadgets and equipment to help with other functional constraints. Monitoring urine, pulse, and blood pressure are examples of self-care techniques (8). Self-selection bias in assessing the effects of self-care habits on health, for example, healthy people may find it simpler to adopt a regular exercise pattern, whereas those who do not practice self-care are more likely to acquire a health condition and are sicker than those who do. People's lifestyle and adapting patterns were analyzed in order to assess the economic implications of self-care. According to the results of a survey conducted by Stearns et al., 59% of participants never drank alcohol and 51% never smoked. More than half of the sample population had healthy weight and slept 6 to 8 hours every night. Swimming or walking (53%) and gardening (47%) were the most frequently mentioned exercises. Hunting and fishing were popular among about 14% of the population. Only 22% of people tested their urine and took their pulse or blood pressure. This study revealed that self-care was economically significant among the sample group. The findings of this study revealed that there was a significant reduction in the cost of medi-care owing to the above-mentioned engagement in activity and exercise, provided the persons who chose to engage in such activities were healthy enough to avoid any intrinsic variable (alcohol, smoking, etc.) (9).

Self-medication, a major cause of health issue

Self-medication is common among both medical and non-medical students. These are commonly used to treat fevers, headaches, flu, coughs, allergies, acidity, and minor infections. People also use sleeping pills and toothache medications. Self-medication is more common in developing

nations such as Pakistan, Bangladesh, Nepal, and India. According to a study done in Pakistan, self-medication causes not only a variety of health problems but also financial loss. To address all of these issues, the government should take necessary steps and supervise drug authorities for sale and prescription. The drug regulating authority and the Health Department should adopt WHO guidelines. Health education and awareness should also be made available to the general public through electronic and print media (10).

In a review study done by Almasdy and Sherrif, 11 studies were identified. In general, the review has shown that self-medication practice with nonprescription medication highly prevalence among university students. The reasons for self-medication are vary among this population and the main symptoms leading to self-medication are headache or minor pain; fever, flu, cough, or cold; and diarrhoea (11).

Self-medication and conceived women at risk

The pattern of self-treatment differs by community, and numerous factors such as age, gender, money, and medical expertise influence it (11). Pregnant women are more likely to self-medicate in poor nations where health care is still improving (12). According to estimates, drug exposure during pregnancy causes 10% or more of all birth abnormalities. Drug usage and self-medication have an impact on fetal health. Research was conducted in which 384 pregnant women were studied and variables related to self-medication were analyzed before and during pregnancy. All pregnant women who used medications without a prescription were deemed self-medicating cases. Before pregnancy, self-medication was observed six months before conception. According to the findings, 53.4% of the women became unwell at least once before pregnancy, with 63.9% having a history of self-medication. 131 women reported using at least one type of drug for self-medication. According to the findings, the rate of self-medication among pregnant women has dropped when compared to pre-pregnancy figures.

According to the results of an Ethiopian research, self-medication prevalence was 63.7% before pregnancy and 20.1% throughout pregnancy. These women self-medicate for dysmenorrhea, menstrual problems, and osteoporosis. They reduced the practice throughout pregnancy due to concerns about the impact of medicines/drugs on embryo development. Some researchers also said that a lack of insurance and financial troubles were factors that drove patients to self-medicate. Because the cost of self-medication was significantly lower than the cost of visiting a physician for individuals without insurance. Another study conducted in China and India found that those with greater education were more likely to self-medicate than those with less education. This is because people learn from brochures and get repeat prescriptions if they get the same condition again (13).

Over-the-counter poisoning

In a population-based study conducted in China, traditional Chinese medicine was widely utilized as a treatment for a variety of ailments ranging from the common cold to chronic health conditions. According to reports from Accident and Emergency Departments, several Chinese herbal over-the-counter drugs have had negative effects, including poisoning

incidents. Such effects were mostly the result of using these medications without consulting with conventional practitioners. From January 2011 to January 2012, a survey was conducted among Hong Kong residents, in which people in the region were contacted and detailed information was acquired telephonically. Respondents were asked to submit information about their background, such as their age, gender, income level, marital status, education, self-reported health, and availability of health insurance. They were also asked about the illness for which they ingested the drugs, such as whether it was self-diagnosed or professionally checked, and if the package properly designated the degree of dose. They are asked whether they have recently encountered any unpleasant effects, such as vomiting, fever, nausea, sleep issues, allergies, or heart/blood pressure concerns. They were also questioned about their beliefs and knowledge regarding the drugs they used, as well as if they were aware of the drug's possible efficacy in terms of good outcome, severity, or negative effects. Certain tests were then carried out to determine whether the responder had a bad drug reaction or obtained information about the medicine from a credible source (14-17).

789 (71.7%) of the 1100 respondents reported using traditional medicine in the preceding year. Cold/influenza symptoms (54.0%), digestive issues (44.0%), musculoskeletal discomfort (43.9%), and sleep problems (5.3%) were the most prevalent conditions for which these medications were taken. When conventional OTC medication users were compared to non-users, the former were more likely to be middle-income (15,000 - 29,999/month) and less likely to claim "very good" or "good" health status. There were 27 adverse events reported by 25 responders, with pills/capsules being the most prevalent cause, followed by plasters/dressings (25.9%), ointment creams (18.5%), and ingestible powder (11.1%). Even one-third of the adverse occurrences reported sought competent medical care. The most urgent issue has been antimicrobial resistance. According to estimates, more than half of antibiotics are purchased over-the-counter and utilized in various parts of the world. Despite the fact that irrational antibiotic usage has spread the problem, no systematic review has been conducted to assess the pattern of use for improvement purposes. At the moment, specific measures for managing and intervening with antibiotic usage are desperately needed (18).

The majority of these occurrences took place for a variety of causes. Despite the existing labels, several users said the labelling was confusing. Many people self-medicate without seeking advice from traditional medical practitioners. The primary weakness of the study was a lack of clinical confirmation of reported occurrences. Even when the validity was confirmed, the primary underlying cause of the adverse event was not found (19).

Prevention of potential risk associated with self-medication

Health professionals and pharmacists can largely prevent possible hazards related with self-medication. A health professional assists the community in reducing the negative impacts of self-medication. While prescribing medications, he should provide clear instructions and explain the purpose so that the patient is able to make an informed decision. Another serious issue is the efficiency of therapeutic

compliance; when a patient does not grasp the treatment, he does not take the drug properly, for example, dose, frequency of administration, and treatment course, etc. Proper education should be provided to the general population in order for them to acquire an educated attitude regarding the usage of medications. This is especially crucial for parents who should medicate their children. Pharmacists play an essential role in recognizing, resolving, and avoiding drug-related issues in order to achieve the best possible patient outcomes and quality of life. Before taking medicine on their own, pharmacists should advise their patients to visit a physician. To determine the proper condition of the patient, the pharmacist must ask the patient several crucial questions and offer relevant information. Pharmacists must ensure that all items purchased are of high quality and originate from reputable sources. Pharmacists should create a system that others may use to handle and distribute drugs with more care and efficiency. Pharmacists must engage in health screening, detect health concerns, and highlight those who are at risk, as well as participate in health promotion programmes and provide the best possible health advice to patients so that they may make educated health decisions (18, 20).

Conclusion

Self-medication is a serious health issue. It would be preferable if consumers were more informed of the dose, timing of administration, and negative effects of overdosage. When this information is lacking, it can lead to issues such as skin disorders, antibiotic resistance, hypersensitivity, and allergy. It is advised that a comprehensive approach be taken to address this issue. Adequate knowledge and education on self-medication should be offered to the general public, and health-care professionals should devote extra time to this purpose.

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