Common Illnesses and Drug Categories Associated with Self-Medication: A Narrative Review

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***Abstract*—Self-medication is the use of medicines by individuals to manage self-recognized symptoms or illnesses without consultation with a qualified health professional. While it can be a practical component of self-care for minor conditions, inappropriate use may result in adverse drug reactions, incorrect dosing, drug interactions, delayed diagnosis, and antimicrobial resistance. This review aims to examine common illnesses and symptoms associated with self-medication, identify frequently used drug categories, and summarize principal reasons and safety concerns reported in the literature. A narrative literature review was undertaken utilizing PubMed, Scopus, Google Scholar, and PubMed Central up to August 2026. The evidence indicates that pain, febrile states, and respiratory complaints are primary triggers for self-medication. Analgesics, non-steroidal anti-inflammatory drugs (NSAIDs), antipyretics, cough preparations, antihistamines, and gastrointestinal medicines are predominantly reported. Reported prevalence varies across populations (e.g., 87% among nursing students in Saudi Arabia, 66.4% in Northern Indian community populations, and 59.4% among Spanish health professionals). Key drivers include perceived illness mildness, previous treatment experience, convenience, and easy access. Community pharmacists play a critical role in supporting safe self-care through symptom assessment, appropriate medicine counseling, referral, and antimicrobial stewardship.**

***Index Terms*—Antibiotics, Antimicrobial resistance, Common illnesses, Over-the-counter medicines, Self-medication.**

I. INTRODUCTION

Self-medication is widely described as the selection and use of medicinal products by individuals to manage self-recognized disorders or symptoms without professional consultation. The concept may include the use of over-the-counter (OTC) medicines, though OTC use and self-medication are not entirely synonymous. Self-medication may also involve the reuse of previously prescribed medicines and, in some settings, the acquisition of prescription medicines without a valid prescription [1]. When limited to appropriate self-care for minor and self-limiting conditions, it may improve convenience and reduce unnecessary use of healthcare services. However, maintaining the boundary between responsible self-care and unsafe medicine use remains challenging.

The risks of inappropriate self-medication include wrong self-diagnosis, inappropriate drug selection, excessive or inadequate dosing, drug-drug interactions, adverse drug reactions, and delays in seeking care for potentially serious illnesses [1, 2]. These concerns become especially critical when antimicrobials are used without an appropriate indication, as unnecessary exposure drives antimicrobial resistance and may delay correct treatment of underlying infections [9].

Patterns of self-medication vary with age, educational background, healthcare access, local medicine regulations, previous treatment experience, and the type of health complaint. Recent primary studies illustrate this variation: in Northern India, fever, cough, and cold were prominent reasons for self-medication [5]; among nursing students in Saudi Arabia, analgesic self-medication was especially common [4]; and among Spanish health professionals, analgesics and anti-inflammatory medicines were leading drug groups [3].

Understanding the illnesses that lead people to self-medicate and the drug categories selected is therefore vital for designing appropriate educational, regulatory, and pharmacy-based interventions. This

narrative review brings together primary observational evidence and relevant secondary literature to describe common clinical triggers, drug categories, behavioral reasons, and safety concerns.

II. OBJECTIVES

• To identify the common illnesses and symptoms that lead individuals to self-medicate.
• To describe the major therapeutic and pharmacological drug categories used for self-medication.
• To summarize the commonly reported reasons and behavioral factors associated with self-medication.
• To discuss important safety concerns and the role of community pharmacists in promoting safe and rational self-medication.

III. METHODOLOGY

Review Design and Literature Search

This work was conducted as a narrative review. A narrative approach was selected because the available evidence includes community-based cross-sectional studies, studies among students and health professionals, and systematic or scoping reviews conducted across diverse settings. A comprehensive literature search was undertaken across PubMed, Scopus, Google Scholar, and PubMed Central up to August 2026 using Boolean combinations of keywords including "self-medication", "over-the-counter", "analgesics", "NSAIDs", "antibiotics", and "common illnesses".

Selection and Synthesis

The review prioritized primary observational studies directly reporting self-medication patterns, symptoms, and reasons, while secondary reviews provided broader context [1-11]. Information was synthesized under clinical indications, drug categories, behavioral drivers, and safety implications.

IV. RESULTS

The final evidence set comprised 11 publications, including four primary observational studies and seven secondary sources. In Northern India, Juneja et al. reported a 66.4% self-medication prevalence, with paracetamol, cough syrup, and antihistamines frequently used, and 64.4% of participants guided by pharmacist recommendations [5]. Faqihi and Sayed reported analgesic self-medication in 87% of nursing students in Saudi Arabia [4]. Malli et al. noted 55.9% of college students used unprescribed medicines as first-line treatment [8]. Cotobal-Calvo et al. found a 59.4% prevalence among Spanish health professionals [3].

TABLE I: COMMON ILLNESSES AND SYMPTOMS ASSOCIATED WITH SELF-MEDICATION

Clinical Category	Common Symptoms	Drug Categories	Key Evidence
Pain & Inflammation	Headache, toothache, muscle/joint pain, menstrual pain	Analgesics, NSAIDs, antipyretics	Prominent in primary studies [3, 4, 8]
Respiratory / Febrile	Fever, cough, cold, sore throat	Antipyretics, antihistamines, cough syrups	Frequent in Northern India study [5]
Gastrointestinal	Acidity, heartburn, indigestion, diarrhea	Antacids, acid suppressants, antidiarrheals	Reported in secondary reviews [2, 7]
Oral & Dental	Dental pain, gum symptoms	Analgesics, topical antiseptics, antibiotics	Documented in literature [6]
Allergic & Skin	Itching, rashes, allergic rhinitis	Antihistamines, topical preparations	Reported in secondary evidence [2, 7]

TABLE II: DRUG CATEGORIES ASSOCIATED WITH SELF-MEDICATION

Drug Category	Examples	Typical Context
Analgesics & NSAIDs	Paracetamol, ibuprofen, diclofenac, mefenamic acid	Headache, musculoskeletal & menstrual pain [3, 4, 8]

Antipyretics	Paracetamol / acetaminophen	Fever and respiratory symptoms [5]
Antihistamines	Cetirizine, loratadine, chlorpheniramine	Allergic rhinitis and cold symptoms [5, 7]
Cough & Cold	Cough syrups, decongestants	Cough and common cold [5]
Gastrointestinal	Antacids, PPIs, loperamide	Acidity, heartburn, diarrhea [2, 7]
Antibiotics	Amoxicillin, azithromycin	Suspected infections (stewardship concern) [9-11]

V. DISCUSSION

Across the reviewed evidence, self-medication is predominantly associated with familiar, mild symptoms such as pain, fever, cough, and cold [3-5, 8]. While practical for minor self-care, persistent or severe symptoms necessitate professional medical evaluation to prevent delayed diagnosis.

Analgesics and anti-inflammatory drugs remain the most frequently utilized agents owing to high familiarity and accessibility [3, 4, 8]. Antibiotic self-medication, although not dominant in all populations, represents a critical public health concern due to antimicrobial resistance risks associated with unsupervised use [9-11].

Behavioral drivers include perceived illness mildness, convenience, lack of time, and previous successful treatment experience [3, 5, 8]. Addressing safety concerns—such as adverse hepatic and gastrointestinal effects, drug interactions, and antimicrobial resistance—requires robust community pharmacist intervention. Pharmacists are uniquely positioned to provide symptom assessment, red-flag identification, appropriate dosing guidance, and timely medical referrals [5, 9].

VI. LIMITATIONS AND FUTURE DIRECTIONS

This review has limitations including heterogeneity in study designs, reliance on self-reported data, and restriction to English-language publications. Future research should utilize standardized definitions, investigate emerging online pharmacy and AI influences, and evaluate community pharmacy stewardship interventions.

VII. CONCLUSION

Self-medication is widely practiced for perceived minor ailments like pain and respiratory symptoms. While offering convenience, it entails risks such as adverse reactions and antimicrobial resistance. Balanced regulatory and educational approaches, supported by active community pharmacist guidance, are essential to promote safe and rational self-medication.

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