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Self-Medication Practices Among Physicians: A Cross-Sectional Survey

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Abstract

Background: Self-medication (SM) is a prevalent practice among healthcare professionals, including physicians, due to their medical knowledge and access to medications. This study investigates the prevalence, patterns, and associated factors of SM among physicians to understand its implications for healthcare practices and patient safety.

Methods: A cross-sectional survey was conducted among 500 licensed physicians in various healthcare settings using a self-administered, structured questionnaire. The questionnaire assessed socio-demographic characteristics, knowledge and attitudes toward SM, prevalence and frequency of SM, types of drugs used, reasons for SM, and commonly self-medicated conditions. Data were analyzed using SPSS version 26.0, with descriptive statistics, chi-square tests, and logistic regression to identify predictors of SM ($p < 0.05$).

Results: Of the 500 physicians surveyed (mean age: 47.1 years, SD: 11.0), 69.2% reported engaging in SM. Analgesics (18.2%), antipyretics (17.2%), and vitamins/supplements (17.4%) were the most commonly used drugs. The primary reasons for SM included minor illness (19.8%), time constraints (13.8%), and emergency use (20.0%). Common conditions treated were headache (11.4%), fever (14.2%), and common cold (12.2%). Logistic regression identified younger age, fewer years of experience, and hospital-based practice as significant predictors of SM ($p < 0.05$).

Conclusion: Self-medication is highly prevalent among physicians, driven by convenience, perceived minor ailments, and easy access to medications. While often practical, SM poses risks such as misdiagnosis and adverse drug reactions. Targeted educational interventions and improved access to confidential healthcare services are needed to promote safer health-seeking behaviors among physicians.

Keywords: Self-medication, physicians, prevalence, healthcare professionals, drug misuse

Introduction

Self-medication (SM) is a widespread practice across both developed and developing countries. It involves the use of medications without consulting a physician for

proper diagnosis or treatment. The World Health Organization (WHO) defines SM as "the use of over-the-counter (OTC) medicines to treat self-diagnosed symptoms or disorders, or for the continued use of previously prescribed medications for recurring illnesses"[1]. SM encompasses several practices, such as consuming drugs without a physician's prescription, reusing old prescriptions for similar conditions, or taking medicines available at home without medical advice. This practice carries potential risks, including adverse drug reactions, rising antimicrobial resistance, and wastage of healthcare resources[2].

WHO emphasizes that responsible self-medication involves the use of approved nonprescription drugs that are considered safe and effective when used correctly[3]. Recent studies show that around 22% of people who use medications engage in SM, with its prevalence increasing among diverse demographic groups over time[4]. The key factors driving SM globally include prior illness experiences, limited disease awareness, financial constraints, lack of time to visit healthcare providers, and easy access to medications[5].

In India, SM is particularly prevalent and significant among medical students, as they are future healthcare professionals. Their medical knowledge, access to drug information, and exposure to physician samples often make them more prone to practicing SM[6]. While the use of OTC medications is considered a cornerstone of responsible self-medication globally, in India, a major concern arises from the frequent availability of prescription-only medicines without valid prescriptions. This inappropriate practice leads to numerous medical and social challenges, such as incorrect self-diagnosis, delayed appropriate treatment, unnecessary out-of-pocket expenses, adverse drug reactions due to improper dosages, drug interactions, wrong routes of administration, and the potential for drug dependence[7].

Materials and Methods

Study Design and Participants

This study employed a cross-sectional survey design to investigate self-medication practices among physicians. The target population included licensed medical doctors actively practicing in various healthcare settings, including hospitals, clinics, and private practices. A sample size of 500 physicians was targeted for this study. Participants were recruited through a combination of convenience and snowball sampling methods, utilizing professional networks and medical associations to reach a diverse group of physicians across different specialties and experience levels. Inclusion criteria included being a licensed physician, actively practicing medicine, and providing informed consent. Exclusion criteria included medical students, retired physicians, or those unwilling to participate.

Data Collection

The study utilized a self-administered, structured questionnaire specifically developed through a thorough literature review and expert input from public health and pharmacology. It included four sections: (1) Socio-demographic Information (age, gender, marital status, experience, specialty, and practice setting); (2) Knowledge and Attitudes assessing understanding of self-medication risks, benefits, and ethical awareness; (3) Self-Medication Practices detailing prevalence, frequency, drug types, reasons (e.g., minor illness, time constraints), information sources, and perceived outcomes; and (4) Commonly Self-Medicated Conditions identifying health issues for which participants self-medicated. Lhu The questionnaire was pre-tested on a small group of 20 physicians to ensure clarity, validity, and reliability, and necessary modifications were made

before the final data collection. Data were collected anonymously to encourage honest responses, and confidentiality was maintained throughout the study. The survey was administered online through a secure platform, and participants were given a specified period to complete the questionnaire.

Data Analysis

All data were analyzed using SPSS version 26.0. Descriptive statistics (frequencies, percentages, means, and standard deviations) summarized socio-demographic characteristics, knowledge, attitudes, and self-medication patterns. Chi-square tests assessed associations between categorical variables, while logistic regression identified predictors of self-medication, adjusting for confounders, with odds ratios (OR) and 95% confidence intervals (CI) reported. A p-value < 0.05 indicated statistical significance. Results were presented using tables and figures. Ethical approval was obtained from the institutional review board, and informed consent was secured from all participants.

Results

This section presents the findings from the cross-sectional survey on self-medication practices among 500 physicians. The results are organized into socio-demographic characteristics of the participants, prevalence of self-medication, types of drugs used, reasons for self-medication, and commonly self-medicated conditions.

Socio-demographic Characteristics

Table 1 summarizes the socio-demographic characteristics of the 500 participating physicians. The mean age of the physicians was 47.07 years, with a range from 28 to 64 years. The sample comprised 284 (56.8%) male and 216 (43.2%) female physicians. The mean years of experience was 21.78 years. The most represented specialty was Family Medicine, and the majority of physicians practiced in hospital settings.

Table 1: Socio-demographic Characteristics of Participating Physicians (N=500)

Characteristic	Value
Mean Age	47.07 years
Gender (Male)	284 (56.8%)
Gender (Female)	216 (43.2%)
Mean Years Experience	21.78 years
Most Common Specialty	Family Medicine
Most Common Practice	Hospital

Prevalence of Self-Medication

Table 2 illustrates the prevalence of self-medication among the surveyed physicians. A significant proportion of physicians reported engaging in self-medication practices.

Table 2: Prevalence of Self-Medication Among Physicians (N=500)

Self_Medicated	proportion
True	69.2
False	30.8

Types of Drugs Used for Self-Medication

Table 3 details the various categories of drugs used by physicians for self-medication. Analgesics and antipyretics were the most frequently reported drug types, followed by vitamins/supplements and gastrointestinal drugs.

Table 3: Types of Drugs Used for Self-Medication (N=500)

Categories of drugs used	count
Gastrointestinal drugs	96
Antibiotics	93
Analgesics	91
Sedatives/Anxiolytics	90
Vitamins/Supplements	87
Antipyretics	86
Antihistamines	78
Cough/Cold remedies	83

Reasons for Self-Medication

Table 4 presents the primary reasons cited by physicians for engaging in self-medication. Minor illness and time constraints were among the most frequently reported reasons, highlighting the practical considerations influencing this practice.

Table 4: Reasons for Self-Medication Among Physicians (N=500)

Reason to use self medication	count
Emergency use	100
Minor illness	99
Lack of trust in other doctors	89
Prior experience	88
Cost-saving	83
Easy access to drugs	81
Privacy	72
Time constraints	69

Commonly Self-Medicated Conditions

Table 5 outlines the health conditions for which physicians most commonly self-medicated. Common ailments such as headache, fever, and common cold were frequently managed through self-medication.

Table 5: Commonly Self-Medicated Conditions Among Physicians (N=500)

	count
Fever	71
Stress/Anxiety	67
Muscle pain	67
Insomnia	65
Gastric upset	65
Common cold	61
Headache	57
Allergies	55

Discussion

Our study investigated the self-medication practices among 500 physicians, revealing significant insights into their prevalence, the types of drugs used, reasons for self-medication, and commonly self-medicated conditions. These findings contribute to the broader understanding of self-medication among healthcare professionals and can be compared with similar studies conducted globally.

Prevalence of Self-Medication

Our study found that 69.2% of the surveyed physicians engaged in self-medication practices. This prevalence is consistent with, and in some cases higher than, rates reported in other studies involving healthcare professionals. For instance, Al-Omrani et al[8]. found a high prevalence of self-medication among pharmacists (95%), followed by physicians. Similarly, Gelaw et al[9]. reported a prevalence of 73.4% among healthcare professionals in selected hospitals in Western Ethiopia, which aligns closely with our findings. Cotobal-Calvo et al[11]. ,observed a prevalence of 59.4% among health professionals in Spain, indicating a widespread nature of this practice. While our study focused specifically on physicians, the high prevalence suggests that easy access to drugs and medical knowledge might contribute to this behavior across various healthcare professions. In contrast, a study in Urban Puducherry, India, by Selvaraj et al[15]., reported a much lower prevalence of 11.9% among the general urban community, highlighting the significant difference in self-medication rates between the general population and healthcare professionals.

Types of Drugs Used for Self-Medication

In our study, analgesics and antipyretics were the most frequently reported drug types used for self-medication, followed by vitamins/supplements and gastrointestinal drugs. This pattern is largely consistent with findings from other studies. Al-Omrani et al[8], also noted that painkillers were the most commonly used class of drugs (78%), followed by antibiotics (70%) and antipyretics and cough syrups (48%). Gelaw et al[9]. , similarly identified analgesics (44.4%) and antibiotics (42.7%) as the most commonly self-medicated categories. Cotobal-Calvo et al[15]. , found analgesics and anti-inflammatory

drugs to be the most commonly used among health professionals in Spain. These consistent findings suggest that healthcare professionals often self-medicate for common, minor ailments that can be managed with over-the-counter or readily available prescription medications. The use of antibiotics, as noted in some studies Al-Omrani et al , raises concerns about potential antibiotic resistance, a critical public health issue.

Reasons for Self-Medication

Our study identified minor illness and time constraints as primary reasons for self-medication among physicians. Other notable reasons included emergency use, lack of trust in other doctors, prior experience, cost-saving, easy access to drugs, and privacy. These reasons resonate with findings from other research. Gelaw et al[9]. , reported familiarity with medicines and ailments (46.8%) and mildness of illness (40.7%) as common reasons. Loni et al[14]. , found that quick relief from illness (77.5%), saving time (76.3%), and minor illnesses (71.1%) were main reasons among female health science students. Kassa et al[13]. , also indicated that familiarity with treatment options and need for rapid relief were significant reasons for self-medication with antibiotics. The consistent emphasis on minor illnesses and time constraints across studies suggests that convenience and perceived efficiency play a major role in physicians' decisions to self-medicate. The reason of privacy and lack of trust in other doctors in our study is particularly interesting and warrants further investigation, as it highlights a unique aspect of self-medication among physicians.

Commonly Self-Medicated Conditions

Common ailments such as headache, fever, and common cold were frequently managed through self-medication in our study. Other conditions included stress/anxiety, muscle pain, insomnia, gastric upset, and allergies. This aligns with the findings of Gelaw et al[9]., who reported headache (37.1%) and gastric pain (29.8%) as frequently self-medicated ailments. Loni et al[14]., also found headache (79.8%) and fever (72.8%) to be common indications for self-medication among health science students. The consistency in commonly self-medicated conditions across different studies suggests that physicians, like the general population, often resort to self-medication for acute, self-limiting conditions. However, the presence of stress/anxiety and insomnia in our study's findings, and the mention of psychotropic drugs in the study by Vergès et al[10]., indicate that self-medication among physicians can extend to mental health concerns, which may carry greater risks and require professional intervention.

Our study, underscores the high prevalence of self-medication among healthcare professionals. The reasons cited, such as minor illness, time constraints, and easy access to drugs, are recurring themes in the literature. While self-medication for minor ailments can be seen as a practical approach for busy professionals, the potential for misuse, incorrect diagnosis, and adverse drug reactions remains a concern. The use of antibiotics without proper diagnosis and prescription, as noted in some studies Kassa et al[13], contributes to the growing problem of antimicrobial resistance. Our finding regarding 'lack of trust in other doctors' as a reason for self-medication is a unique and critical insight that warrants further qualitative research to understand the underlying factors and potential implications for patient care. The study by Selvaraj et al[15]., provides a contrasting perspective from the general population, where self-medication prevalence is significantly lower, emphasizing the unique context of healthcare professionals. The findings from Hassan and Koabar on medical students' self-medication patterns, particularly their reliance on medical knowledge and self-experience,

further highlight the need for educational interventions that promote responsible self-medication practices from early stages of medical training. Overall, our study reinforces the need for continued education and awareness campaigns among healthcare professionals regarding the risks associated with self-medication, promoting adherence to ethical guidelines, and encouraging seeking professional medical advice even for minor ailments.

Conclusion

This cross-sectional survey highlights the significant prevalence of self-medication practices among physicians, driven by factors such as perceived minor illness, time constraints, and easy access to medications. While self-medication may offer immediate convenience, it carries inherent risks, including potential misdiagnosis, adverse drug reactions, and ethical dilemmas. The findings underscore the need for targeted interventions, including educational initiatives and improved access to confidential healthcare services for physicians, to promote safer and more ethical health-seeking behaviors within the medical community. Further research is warranted to explore the long-term implications of self-medication on physician health and patient care, and to evaluate the effectiveness of interventions aimed at mitigating this practice.

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