

## RESEARCH ARTICLE – ARTICLES DE RECHERCHE

**PERCEPTIONS OF FAMILY PHYSICIANS REGARDING PATIENTS' SELF-MEDICATION**Victoria BABCINETCHI<sup>1,2</sup>, Alina TIMOTIN<sup>1</sup>, Oleg LOZAN<sup>1</sup><sup>1</sup>School of Public Health Management, Nicolae Testemitanu State University of Medicine and Pharmacy, Chisinau, the Republic of Moldova<sup>2</sup>Timofei Mosneaga Republican Clinical Hospital

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**Keywords:** self-medication, family physicians, self-treatment, self-care, patient education, drug interactions, polypharmacy.

**Introduction.** Self-medication is the practice of using medications to treat self-diagnosed conditions without prior consultation with a healthcare specialist. This phenomenon is widespread globally, reaching a rate of over 90% in some countries. The objective of the study was to explore and analyze the perceptions of family physicians in the Republic of Moldova regarding self-medication. **Material and methods.** The study was conducted using descriptive, quantitative, and cross-sectional methods. Data were collected from November 2023 to March 2024 on a sample of 346 family physicians from the Republic of Moldova. **Results.** It was found that 87.6% of physicians frequently or very frequently encounter patients who resort to self-medication, and 68.79% of physicians have a negative attitude toward this phenomenon. No statistically significant differences were observed between the region, work environment, or work experience of the physicians and the frequency of patients practicing self-medication ( $p>0.05$ ). A trend was noted of an intensified negative attitude toward self-medication with increasing work experience ( $p<0.05$ ). At the same time, 55.2% of physicians identified the lack of awareness of the risks associated with self-medication as the main factor driving patients to engage in this practice. **Conclusions.** Self-medication is frequently observed in the Republic of Moldova, with a primary factor being the lack of awareness, making public education on this issue imperative. The negative attitude toward self-medication increases with the physician's work experience and is influenced by their own practices. Medical professionals play a decisive role in preventing the risks of self-medication through informing, providing therapeutic advice, and educating patients.

**Cuvinte-cheie:** automedicație, medici de familie, autotratament, autoîngrijire, educarea pacientului, interacțiuni medicamentoase, polifarmacie.

**PERCEPȚII ALE MEDICILOR DE FAMILIE PRIVIND AUTOMEDICAȚIA PACIENȚILOR**

**Introducere.** Automedicația este practica de a utiliza medicamente pentru a trata afecțiuni autodiagnosticate, fără consultul în prealabil al unui specialist din domeniul sănătății. Acest fenomen este foarte răspândit la nivel global, atingând o rată de peste 90% în unele țări. Obiectivul studiului a fost de a explora și de a analiza percepțiile medicilor de familie din Republica Moldova privind automedicația. **Material și metode.** Studiul a fost realizat apelându-se la metodele descriptivă, cantitativă, transversală. Datele au fost colectate în perioada noiembrie 2023 – martie 2024, pe un eșantion de 346 de medici de familie din Republica Moldova. **Rezultate.** S-a constatat că 87,6% dintre medici au întâlnit frecvent sau foarte frecvent pacienți care apelează la automedicație, iar 68,79% dintre doctori manifestă o atitudine negativă față de acest fenomen. Nu s-au relevat diferențe statistice semnificative între regiunea, mediul de activitate sau stagiul de muncă al medicilor și frecvența atestării pacienților care practică automedicația ( $p>0,05$ ). S-a observat o tendință de intensificare a atitudinii negative față de automedicație odată cu creșterea experienței de muncă ( $p<0,05$ ). Totodată, 55,2% dintre medici au identificat ca principalul factor ce determină recurgerea la automedicație lipsa conștientizării riscurilor pe care aceasta le prezintă. **Concluzii.** Automedicația este frecvent atestată în Republica Moldova, iar un factor principal în practicarea acesteia constă în lipsa conștientizării, fapt pentru care educația populației în acest sens devine imperativă. Atitudinea negativă față de automedicație crește odată cu experiența de muncă a medicului și este dependentă de propriile practici ale acestuia. Lucrătorii medicali au un rol decisiv în prevenirea riscurilor de automedicație prin informare, oferire de sfaturi terapeutice și educare a pacienților.

## INTRODUCTION

Self-medication is a major global challenge involving the entire healthcare system. Today, understanding and accurately assessing self-medication are becoming increasingly important topics. The rapid development of technology, ease of access, and exchange of information has led to a rise in both self-diagnosis and self-medication. Self-medication is a widespread practice across all age groups – youth, adults, and the elderly – and is frequently encountered worldwide (1). Some authors estimate the global prevalence of self-medication to be between 32.5% and 81.5% (2), while others report even broader ranges, up to 100% in certain regions (3).

Self-medication is a complex phenomenon that cannot be fully encompassed by current definitions (4). According to the World Health Organization, "self-medication involves the use of medicines by consumers to treat self-recognized disorders or symptoms, or the intermittent or continuous use of a prescribed medication for chronic or recurrent diseases or symptoms" (5). Self-medication is an essential component of self-care, contributing to health maintenance, disease prevention, and treatment (6). The concept of self-medication includes not only the use of over-the-counter medicines by individuals for themselves but also administering these medications to other family members, particularly infants, children, or the elderly (5). The International Pharmaceutical Federation and the World Self-Medication Industry define self-medication as "the use of non-prescription medicines by individuals on their own initiative." (7).

Self-medication carries both benefits and risks. While it can be helpful to patients and healthcare professionals, it can also cause them harm (1). Inappropriate self-medication occurs when people use medications irresponsibly, such as taking prescription drugs without medical consultation, using leftover medications prescribed for other conditions, sharing medications with friends or family, or using expired medications (8). Recent data reveal a significant increase in adverse reactions associated with self-medication during the COVID-19 pandemic. Comparative results by Gras and his team indicate that in 2020, 3.7% of reported adverse reactions were linked to self-medication, whereas in 2019, this proportion was only 1.6% (9). Awareness of the responsibility for

self-medication must be shared by all involved parties, including pharmaceutical workers, healthcare professionals, the general population, and each individual consumer (10).

In the Republic of Moldova, few studies have explored family physicians' attitudes toward self-medication, with existing research covering narrower aspects and conducted over 10 years ago, such as Safta et al. (11) and Ghicavî et al. (12). In this context, the aim of the present study is to explore both the attitudes and practices of family physicians toward self-medication, enabling the identification of aspects that help minimize and prevent risks associated with self-medication. The primary hypothesis is that family physicians perceive self-medication as a common practice with significant health risks for patients, yet they may not fully understand the benefits that responsible self-medication can offer.

In this study, for the first time, detailed insights were identified regarding family physicians' opinions on the reasons and factors that drive patients to self-medicate, as well as the consequences of this practice observed by physicians and other important aspects of self-medication. These insights aim to support the development of a set of recommendations to minimize and prevent the risks associated with self-medication.

## MATERIAL AND METHODS

### *General objectives*

The main objective of this study was to explore and analyze the perceptions of family physicians in the Republic of Moldova regarding self-medication.

### *Research design*

The study was descriptive, quantitative, and cross-sectional, aimed at providing a detailed and comprehensive analysis of family physicians' perceptions regarding self-medication.

### *Participants*

The study included 346 family physicians from the Republic of Moldova, working in primary healthcare institutions in urban and rural areas across various regions of the country (Chişinău municipality, Center, North, and South). The sample size was calculated using a specific formula for representative sampling in descriptive studies of finite and small populations.

### *Instrument used*

To explore family physicians' opinions on self-medication, a questionnaire comprising 26 questions was developed. The questions were organized into four distinct sections designed to collect information on: general data, opinions and attitudes, practices associated with self-medication, and relevant aspects related to self-medication control. A total of 349 questionnaires were received, three of which were deemed invalid. Data collection took place between November 2023 and March 2024.

### *Ethical aspects of the research*

The study followed research ethics principles, and the participation of physicians was voluntary. The questionnaires were anonymous, ensuring data confidentiality.

### *Data and statistical analysis*

Descriptive statistics were used to analyze the results, and the percentage distribution of responses was shown for each response option. Quantitative analysis was conducted using Excel. To determine the statistical significance of associations between variables, the chi-square test ( $\chi^2$ ) was used.

## **RESULTS**

Of the total participants, 129 physicians (37.28%) were from rural areas and 217 (62.72%) from urban areas. Most participants have over 20 years of work experience (56.94%), while 22.3% have up to 10 years of experience, and one in five physicians (20.81%) reported experience between 11 and 20 years. The majority of physicians (87.6%) indicated that they frequently or very frequently encounter patients who practice self-medication. Only 12.1% of physicians encounter this situation occasionally, while only 0.3% encounter it rarely. No physician reported never encountering patients who practice self-medication. There are no statistically significant differences based on the physician's region, work setting, or professional experience in relation to the frequency of encountering patients who self-medicate ( $p > 0.05$ ).

The evaluation of the general opinion on self-medication revealed that the majority of family physicians (68.79%) have a negative attitude toward this practice. In contrast, 12.43% of respondents have a positive attitude, accepting self-medication to some extent, while 18.79% are neutral or undecided.

The data analysis revealed that physicians who never practice self-medication or do so only occasionally have the highest proportion of negative attitudes, at 76.00% and 74.46%, respectively. In contrast, those who frequently (59.83%) or always (60%) engage in self-medication show lower proportions of negative attitudes. At the same time, physicians who frequently or always practice self-medication exhibit a higher proportion of positive attitudes (18.8% and 20.0%, respectively) compared to those who practice it occasionally (8.15%) or never (8%).

The attitude towards self-medication varies depending on the physicians' experience. More than half (54.55%) of physicians with up to 10 years of experience have a predominantly negative attitude towards self-medication, while 14.28% have a positive attitude. Among those with 11 to 20 years of experience, 72.22% exhibited a negative attitude towards self-medication, whereas 13.89% are more inclined to accept it. Physicians with over 20 years of experience show a negative attitude in 73.10% of cases, while 11.17% hold a positive attitude. Thus, it is evident that the negative attitude towards self-medication increases with years of work experience ( $p < 0.05$ ,  $p = 0.02$ ).

The attitude of family physicians also varies depending on the environment in which they work, with those in rural areas exhibiting a more negative attitude towards self-medication (75%) compared to those in urban areas (65%). However, this relationship is not statistically significant ( $p > 0.05$ ,  $p = 0.134$ ).

Physicians were encouraged to express their opinions on self-medication in various contexts. The highest scores (calculated using the Likert scale) were attributed to the statements: self-medication should be approached with caution (1.34); self-medication is acceptable with proper patient education, in well-defined situations, and for certain types of medication (0.84); it is recommended only for OTC (over-the-counter) medications (0.6). The most negative attitude was expressed towards self-medication with prescription medications, which scored 0.18. These results suggest that physicians consider self-medication acceptable only under strict conditions, emphasizing the need for heightened caution and proper patient education.

While 61.8% of family physicians have a negative attitude towards patients who use alternative

sources (such as the internet or relatives) to seek information about treatments before consulting a doctor, 24.3% display a neutral attitude. The practice of requesting advice from a pharmacy for OTC medications without medical consultation also generated predominantly negative or neutral reactions: 57.23% and 28.32%, respectively. On

the other hand, physicians showed openness to consulting patients even for the most minor ailments, with the majority (61.6%) expressing a positive or very positive attitude, indicating an appreciation for these behaviors, while the percentage of those with a negative attitude was relatively low (11.6%) (fig. 1).

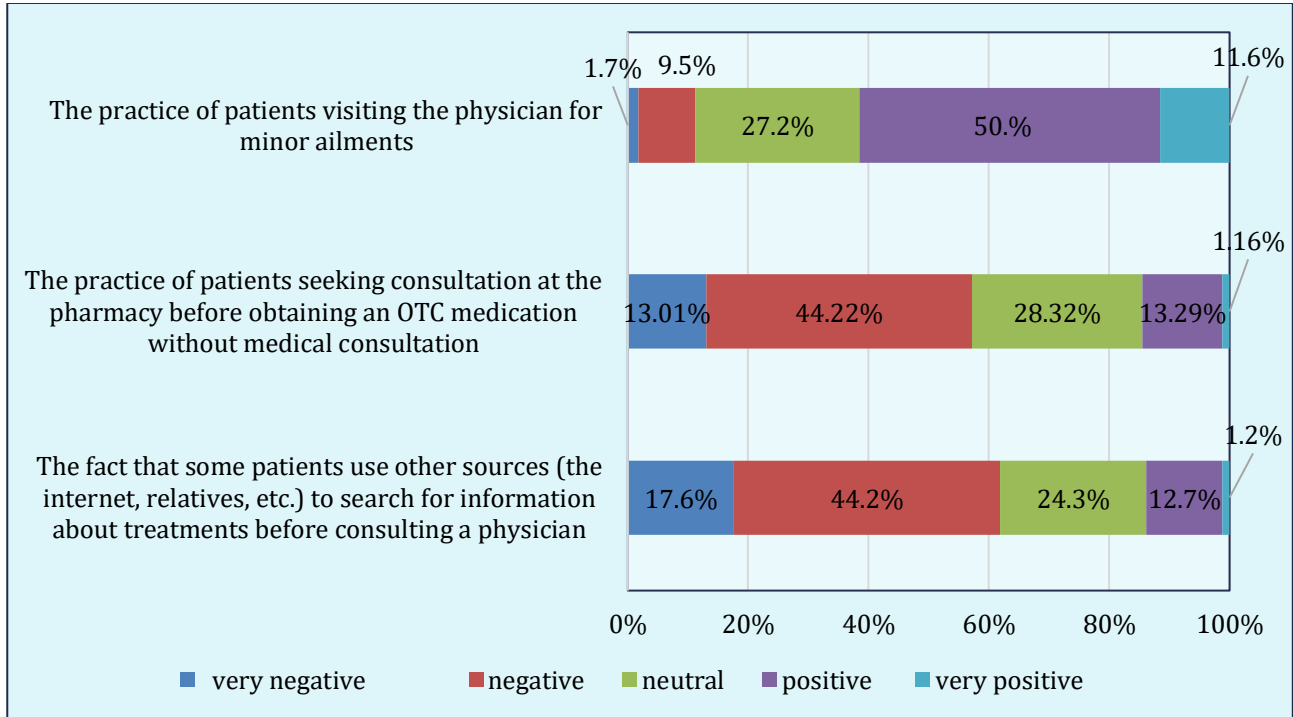


Figure 1. Physicians' attitudes towards patients' practices regarding medication information, %.

Physicians' attitudes towards self-medication vary depending on the category of medication. Only 21.7% of physicians have a negative or very negative attitude towards the purchase of OTC medications without prior medical consultation. In contrast, 63.4% disapprove of the purchase of RX medications based on a prior consultation. The attitude is even stricter in the case of purchasing RX medications based on advice from relatives or information found online, with 91.9% of physicians expressing a negative or very negative opinion. For antibiotics, 92.6% of physicians showed a negative attitude towards their use without appropriate medical consultation. In this context, physicians highlighted significant concerns regarding self-medication, particularly for certain groups of medications. Antibiotics were identified by 93.1% of physicians as posing serious or very serious risks, followed by medications for sleep disorders and anxiety (86.7%) and nonsteroidal

anti-inflammatory drugs (75.43%). Moderate consequences were most frequently associated with medications for colds and flu (54.0%) and those for digestive tract issues (50.3%). Vitamins and dietary supplements were considered relatively harmless (57.3%), while 55.5% of physicians estimated minor or negligible risks for phytotherapy. Using the Likert scale, a total coefficient was calculated for each opinion regarding medications and the negative consequences (side effects, worsening health conditions, etc.) that may arise. The highest coefficient (4.34) was attributed to antibiotics, suggesting that physicians consider this group of medications to have the most severe negative consequences, while phytotherapy was deemed the safest, with the lowest coefficient (2.25).

According to the data obtained in the study, 74% of physicians always ask patients about previ-

ously used medications, 23.4% do so frequently, while 2.6% only occasionally. According to physicians, the conditions for which patients most of

ten resort to self-medication are: cold and flu (97.7%); various types of pain (88.2%); and digestive problems (75.1%) (fig. 2).

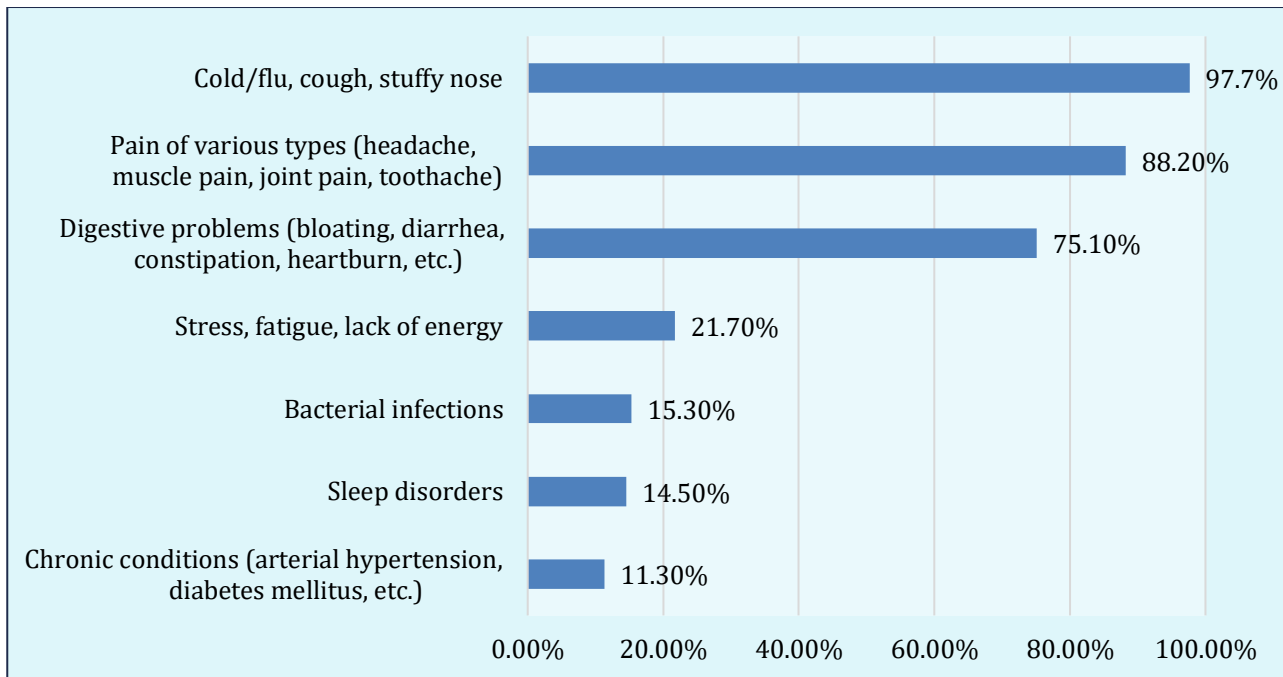


Figure 2. Situations in which patients resort to self-medication, %.

In the opinion of family physicians, the main factors driving patients to self-medication are the lack of awareness about its risks (55.2%), the accessibility of OTC medications (48.3%), the desire to avoid crowded medical institutions, and a lack of time (42.8%). Other influencing factors include patients' belief that the condition is minor (37.3%), prior experience with a specific medication (34.4%), and difficulties scheduling medical appointments (27.7%). Physicians acknowledge that self-medication has both benefits and risks. Only 0.9% of physicians stated that self-medication poses no risks, while the majority highlighted risks such as worsening the patient's condition (68.8%), antibiotic resistance (66.2%), delayed diagnosis (65.0%), undesirable side effects (48.8%), accidental overdosing, and drug interactions (42.8%). The benefits of self-medication, according to physicians, include active patient participation in their healthcare (52.3%), avoiding work absences for minor symptoms (43.1%), patient autonomy in managing minor symptoms (41.9%), and reducing the strain on the healthcare system (39.3%). Additionally, self-medication can increase the availability of medical services in rural or remote areas (22%) and contribute to saving medical resources (19.9%).

While 66.7% of physicians always assess compliance with instructions for OTC medications, 71.9% consistently provide education to patients regarding self-medication, and 57.5% evaluate patients' knowledge about self-medication. Although 65.3% of physicians consider that patients are not sufficiently informed about the risks of self-medication, 52.6% do not have enough time for detailed discussions (fig. 3).

The vast majority of physicians (88.2%) support the idea of stricter regulations on the dispensing and sale of RX medications. Key measures for regulating and controlling self-medication include implementing stricter rules for dispensing medications (80.6%), developing tools or technologies for monitoring medication purchases through a centralized system (62.7%), and enforcing stricter regulations on medication advertising (60.7%). Educating patients through awareness and public information campaigns is considered extremely important, and encouraging the reporting of adverse reactions is seen as useful for controlling self-medication (48.8%). In contrast, involving pharmacists in this process is less popular (46.2%).

The majority of respondents (54.6%) believe that

responsibility for informing patients should be shared between family physicians and pharmacists, with regular information exchange. Family physicians also see an important role for specialist physicians in educating and informing patients (27.7%). Only 8.4% of respondents support the

idea that the responsibility should rest solely with pharmacists or family physicians (2.0% each), highlighting the importance of an interdisciplinary and collaborative approach in managing self-medication.

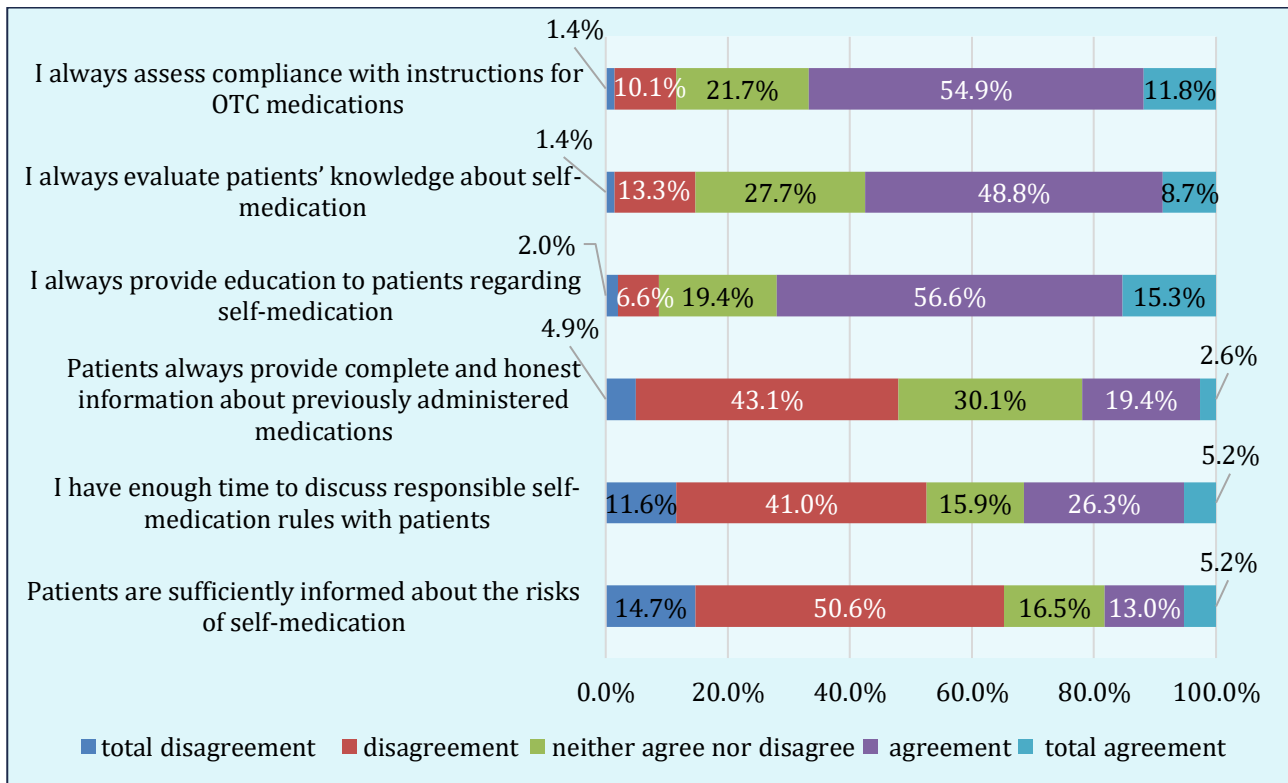


Figure 3. Physicians' opinions on specific aspects of self-medication, %.

**DISCUSSIONS**

Studies on self-medication are generally more common among patients. However, some research suggests that physicians consider self-medication an acceptable practice for minor issues, while being aware of potential risks such as misdiagnosis or adverse drug reactions (11). In the Republic of Moldova, no recent studies have been conducted exploring the attitudes of family physicians towards self-medication. For example, a 2011 study reported that 60.94% of physicians rejected self-medication, but did not specify the specialties of the participating physicians (12). Another study, from 2014, found that 87.5% of physicians held a negative attitude towards self-medication, though it included doctors from various specialties (13).

Family physicians, being in closer contact with patients and directly involved in managing self-medication, can provide more precise infor-

mation about this phenomenon. Therefore, the results of this study offer valuable insights into current perceptions. Thus, we observe that 68.79% of the interviewed physicians have a negative attitude, which reflects an awareness of the risks associated with self-medication. This finding aligns with trends observed in studies from other countries, although direct comparison is limited due to differences in design. For example, a study conducted in Jordan on 695 adults (44.5% from the medical field, 55.5% from outside the medical field) found that 65.3% of respondents disagreed with the idea that physicians accept self-medication (14).

Focusing exclusively on family doctors and exploring their attitudes towards self-medication in detail provides a deep understanding, offering a specific and current perspective that can contribute to the development of policies aimed at reducing the risks associated with self-medication.

## CONCLUSIONS

1. In the Republic of Moldova, self-medication is a widespread practice, particularly common in minor ailments. Patients practice it for various reasons, including avoiding overcrowding in medical institutions and lack of time. However, lack of risk awareness and easy access to over-the-counter medications are critical factors. The majority of family physicians adopt a negative attitude towards self-medication, emphasizing the need for stricter regulations and better patient education.
2. The hypothesis of the study has been confirmed, and in order to reduce the risks associated with self-medication and promote the responsible use of medications, it is essential to implement concrete measures, including stricter regulations and broader health education.

## LIMITATIONS OF THE STUDY

This study evaluates self-medication exclusively from the perspective of family physicians. Another direction for future research would be to investigate the perceptions of other stakeholders involved, such as pharmacists, specialist doctors, and patients.

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