PATIENTS, PHARMACISTS AND PHYSICIANS VIEWS ON THE USE OF OVER-THE-COUNTER-DRUGS. A COMPARATIVE ANALYSIS

Antoaneta Tsvetkova¹, Anna Todorova²*, Valentina Petkova³

¹TRS Medical College, Medical University – Varna.
²Faculty of Pharmacy, Medical University – Varna.
³Faculty of Pharmacy, Medical University – Sofia.

ABSTRACT
Overconfident consumer decisions, unequal or limited access to health care services and related pharmaceutical services, economic disparities and financial constraints are the factors that underlie the ever increasing number of Bulgarian patients who seek self-medication – mainly by means of non-prescription medicines (OTC drugs), nutritional supplements, bioactive food components and medicinal herbs. This entails a weaker and less trustful relationship between patients, pharmacists and physicians. Increased sales of non-prescription medicines and nutritional supplements are underpinned by prevailing public attitudes towards these products as adjunct medications and first-line treatment of acute and chronic diseases, as well as by public’s heightened awareness of the importance of overall health and well-being. A survey conducted by Booz & Company shows that 240 million people buy OTC drugs each year; 60 million of those consumers do not seek a medical consultation or a treatment by a specialist. As a result, the availability and the use of OTC drugs create significant value – $ 102 billion in yearly savings for the U.S. health care system, e.g. every dollar spent on OTC medicines saves $ 6-7.

KEYWORDS: Self-medication, pharmaceutical market, adverse drug reaction (ADR), health.

INTRODUCTION
In the context of the ongoing health care reform, Bulgarian patients are not only the final consumers of pharmaceutical products, but customers of key importance. Patients’ opportunity to make a free choice and their out-of-pocket payments for health services
enhance patients’ influence over the aggregate spending in the pharmaceutical market. The
decrease in consumers’ purchasing power is a distinct tendency due to the growing social
insecurity, inflation, unemployment and impoverishment in times of economic and political
crisis, accompanied by an intense social polarization in the country.

Numerous studies show that consumer health literacy is improving, shaped by the
informational sources, which provides abundant information on healthcare topics and related
product discounts in advertisements of medicines, medicinal products, food supplements and
bioactive food components. Considering this process, it is imperative that patients obtain
reliable additional information on health and drug related issues. \(^1\)

People with good health literacy and health insurance coverage have constantly growing
needs, demands and expectations about their statutory rights to receive healthcare and
pharmaceutical services of high quality.

Surveys of social research companies show that Bulgaria is one of the countries within the
EU, which rank at the bottom for health care and disease prevention. Individual commitment
to health promotion and disease prevention is not strong enough due to financial constraints,
bureaucratic obstacles and insufficient information. Nearly 10% of Bulgarians seek self-
treatment and self-medication, because they distrust their physicians and the health system as
a whole. \(^2\)

Improved overall health status would reduce expenditures for hospital treatment, and
subsequently, the pressure on the health system. Society would additionally benefit from
consequential higher job efficiency and added social value. A higher quality of life and a
longer life expectancy would be the expecting long-term outcomes.

The above-described factors determine the ever-increasing importance of OTC drugs and
patients’ interest in self-medication.

The use of OTC drugs in Bulgaria makes no exceptions as far as global trends are concerned.
The share of these products in the pharmaceutical market is constantly rising regardless of the
economic crisis. According to OTC market data, the total expenditure on OTC drugs in
Bulgaria was equivalent to 207 million euros in 2010, 224 million euros in 2011, and 261
million euros in 2012. \(^7\)
The diagram below illustrates the OTC market for the period 2009 – 2012 according to the data on OTC drugs (nutritional supplements not included), published on the home page of the Bulgarian Drug Agency of the Ministry of Health.

![Graph of OTC market analysis in Bulgaria (2009-2012)](image)

**Figure 1: Analysis of the pharmaceutical market in Bulgaria (4)**

The above diagram shows that the prices outpace the sales, which impedes patients’ access to OTC drugs. The reclassification of a prescription drug into an OTC drug could lower the cost of the medical treatment. The patients’ role as consumers of medical products, their health insurance status and their consumption expenditures turn them into the most important customer in the pharmaceutical market. Consumers’ financial capacity, trust and satisfaction
prove to be both prerequisites and key factors for a stable cash flow and sustainable development of pharmaceutical structures in a highly competitive environment. [1]

When calculating the costs of their medical treatment, patients take into account not only the price of the medicines but also the medical taxes and the long wait-times at doctors’ offices, which cause loss of potential earnings. Furthermore, the National health insurance fund (NHIF) reimburses predominantly 25% of the cost of the drugs prescribed. Thus, the cost of a treatment with medicines on prescription is much higher than the price of the corresponding treatment with OTC drugs available in each pharmacy. [5] The use of OTC drugs does not specifically require a visit to the doctor and receiving a prescription.

**Objectives**

That is why the aim of this study is to conduct an opinion survey among patients (consumers), pharmacists and physicians on the main reasons for the purchase and use of OTC drugs and on the specific aspects of that use according to the medical professionals.

**Methods**

The methodology used with all three respondent groups was a direct individual anonymous questionnaire in a written form.

**RESULTS AND DISCUSSIONS**

According to the survey patients (consumers), pharmacists and physicians are unanimous in their opinion that the use of non-prescription drugs in Bulgaria is increasing in line with global trends. With regard to patient safety, this process requires health care professionals to assume new behavior standards and additional responsibilities. The role of the patient is also changing. In addition, the increased use of OTC drugs also has a positive economic impact on the health system.

This survey was conducted in the city of Varna. The survey tool was a direct individual anonymous questionnaire in a written form. The questionnaire gathered information on the main reasons for purchasing OTC drugs, certain aspects of their use, physicians’ and pharmacists’ views and attitudes toward self-medication. The survey encompassed a period from February 2013 to October 2013. Customers asking for OTC drugs in pharmacies of different size and location in the town were randomly selected as respondents. The sample of general practitioners and medical specialists was drawn on a random basis from the personnel
lists of general hospitals (Multi-profile Hospital for Active Treatment) and diagnostic consultation centers located all over the town. The sample of pharmacists comprised specialists who were interviewed in their professional environment – the pharmacies.

The survey outlines some characteristics of the typical consumer of OTC drugs. When asked whether they use OTC drugs, 64.53% of patients give an affirmative reply, 27.33% of them give a negative reply, and 8.14% say they have rarely used OTC drugs. Our study finds that neither the gender, nor the educational level of patients affect their inclination to purchase OTC medicines. This result does not correspond to the results of similar surveys in other countries in the EU, which show that people with higher educational level are more likely to seek self-medication.

The price is the most influential factor in choosing a pharmacy for the purchase of OTC drugs, and the proximity of the pharmacy comes in second place. Older respondents show lower propensity to seek self-medication, i.e. the primary users of OTC drugs are young people in active working age and with a higher income.

Another distinct result of the survey shows that the level of income does not affect the inclination to self-medication – users buy OTC drugs regardless of their income. This important characteristic of Bulgarian consumers reveals their natural inclination for self-medication regardless of their income, i.e. both low-income and high-income consumers buy OTC drugs. Individual's level of wealth or income does not influence the type of treatment of Bulgarian patients. Thus, potential consumers of OTC drugs are even people whose income and savings do not cover the cost of self-medication. For the purpose, such consumers tend to borrow money.

There is an increase of the inventory nomenclature of OTC drugs in the pharmacies as compared to the inventory nomenclature of medicines on prescription. Pharmacists acknowledging this fact comprise 58.75% of the respondents, 15% of them say OTC drugs do not outpace prescription medicines, 22.50% report parity, and 3.75% cannot give a definite answer.

The physicians who report an increase of patients seeking self-medication comprise 57.35% of the respondents; the other 42.65% do not report such an increase. The respondents’ answers take into account self-treatment of both chronic and acute diseases.
Our survey compares the views of all the respondents about the factors underlying the purchase of OTC medications. For this purpose, the respondents of all three focus groups receive a table with six potential factors to choose from. Each factor can be rated from 1 to 5 in ascending order in respect of its importance.

![Comparison of opinions of patients, physicians and pharmacists](image)

**Figure 3: Comparison of opinions of patients, physicians and pharmacists**

According to pharmacists, the strongest motive is the convenience of buying medicines without a prescription – the average rating is 4.54. Physicians consider the cost-effectiveness to be the most important factor – its average rating is 4.15. Patients share doctors’ opinion and rate the cost-effectiveness with 3.83. The statement: “Purchasing medicines without a prescription is convenient” strongly polarizes respondents’ opinions. Physicians rate its importance as the lowest possible and consider it an obstacle in their work, whereas pharmacists consider it the most important factor that facilitates the purchase of OTC drugs. Patients’ opinion values are close to the median values in the scale. The spread of data values is 2.25. The importance of the factor “self-medication improves cost-effectiveness” generates strongly diverging opinions in the different focus groups. Physicians consider it the motive with the highest weight value for choosing OTC drug treatment, whereas pharmacists rate it in the last place. Patients’ opinion values are slightly above the median. The spread of data values of this factor is 1.65. The expenses of a treatment are associated with the price of the
medicine, the medical fee, the transportation expenses and the cost of sickness absence. The fact that patients can cut the cost of their treatment by avoiding medical consultations is highly appreciated by the them, whereas physicians do not rank it as a very important factor. The spread of data values is 0.97 as shown in the table beneath. All three focus groups share similar views on the importance of the timesaving feature of self-medication. Therefore, they unanimously assign values higher than the median. The spread of data values in this case is only 0.15 as shown in figure 7. Respectively, the health system also benefits from lower levels of reimbursement and less wait-times for consultations.

The statement that self-medication reduces sickness absence generates slightly different opinions among the representatives of the three focus groups. The spread of data values is 0.59. Direct losses are very often associated with sickness absence, while indirect losses are incurred by reduced work ability and low vitality. The health system is frequently burdened with statutory sick pay for conditions, which do not imperatively need inpatient treatment or ambulatory health care.

There is not a big difference in the assessment of the medical information as an important decision-making factor – the spread of data values is 0.73. Exhaustive information about OTC drugs is of crucial significance for the correct choice and rational use of these medicines. Therefore, the pharmacies are often the most appropriate places where consumers receive relevant information, and the pharmacists are traditionally the most reliable and accessible source of advice.

The communication between patients and professionals is often considered by patients as one of the most important aspects of the quality of health care services, whereas physicians view as dominant the administrative, economic, technical and regulatory aspects in providing safety. All three groups of respondents – patients, physicians and pharmacists – have most similar assessment of the following three factors: Self-medication is time-saving (no consultations with GPs), Self-medication reduces sickness absence, Health care professionals provide exhaustive medical information.

According to our survey, the prevailing opinion of pharmacists is that various forms of advertising have strong impact on patients’ choice of drugs – 73.75% of professionals acknowledge this fact. They assess the decisive role of advertising as quite disturbing and believe that the process of purchasing a medicine should include a consultation with a
medical professional. In their opinion, this would guarantee the adequate choice of medicines and the safety of patients.

In our survey, we inquire of all three respondent groups to assess the benefits and the risks of the use of OTC drugs. The majority of the interviewed consumers (46.51%) are not aware of the possible adverse effects of OTC drug treatment; approximately one out of every four consumers reports complications resulting from the use of OTC drugs, and 29.07% of consumers are not sure whether the adverse medical reaction is a consequence of the treatment with nonprescription medicines.

According to most of the pharmacists, the use of OTC drugs without a professional supervision poses a risk to patients – 57.5% of the respondents share this opinion, 12.50% of them have a positive attitude towards self-medication, and another 30% of them identify potential adverse consequences but do not take a firm position on that issue.

More than half of the physicians (61.76%) are convinced that self-medication mainly poses risks to patients, another 32.35% of them regard self-medication as a source of medical complications, and just 5.88% of them identify only the benefits of such treatment.

Our survey includes a question concerning the reporting of cases of adverse drug reaction. All of the interviewed physicians and pharmacists (100%) answer that they have not filed a report on the internet home page of the Bulgarian Drug Agency (BDA), regardless of the simplified procedure and their own awareness of the high risks of self-medication.

The BDA system for registration of reports on adverse drug reactions is a part of the European system and legislation. It is mandatory for all medical professionals to comply with the requirements and to report suspected adverse reactions of the products on the pharmaceutical market in Bulgaria. Medical professionals should also perform post-marketing control and receive information from patients about the use of OTC drugs.

Nevertheless, Bulgaria is one of the countries in the EU where cases of suspected adverse reactions are most rarely reported by professionals. Such information would enhance responsible self-medication and could increase the economic benefits from this type of medical treatment.
CONCLUSIONS
The importance of post-marketing control is growing correspondingly to the increase of OTC drug sales. Patient safety and high-quality standards of medical practices are inextricably linked. Communication and collaboration between patients and medical professionals should be strengthened. Safe and cost-efficient self-medication necessitates an explicit classification of those conditions that are appropriate for self-diagnosis and self-medication. The use of nonprescription medicines will certainly increase. Their rational use will facilitate the process of obtaining optimal therapeutic results at lower costs both for the patients and for the national health system.

REFERENCES
8. jivotatdnes.bg/index.php, Drug Safety is a Priority In Bulgaria