### THE PROBLEM OF USAGE OF DRUGS WITHOUT PRESCRIPTIONS BY THE YOUTH

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**Summary:** Introduction. Self-treatment, defined as application of drugs without prescription without consulting your doctor has become a common phenomenon. Easy access to this group of pharmaceutical. advertising campaigns and lack of awareness of adverse effects as a result of incorrect application makes drugs without prescription the medications which have become our first choice.

The aim of the study is to assess the problem of the use of over the counter (OTC) drugs by young people living in the Silesian Voivodeship.

Material and methods. The study included 180 persons from the Silesian voivodeship at the age of 18-30.

The research tool was an author's, anonymous questionnaire. The questions included within it concerned, among others: frequency, form and side effects of drugs applied without prescription.

Results. Despite the fact that the majority of respondents (57%) assess their health state as good, the overwhelming number of people (91%) report applying medications without a prescription. The most popular OTC pharmaceutical products include painkillers and vitamins. One in five respondents (20%) admits that he or she consumes more medication than it is recommended in the package leaflet.

Conclusions. Very good and good health state declared by the respondents does not exclude

accepting their medication without prescription. In case of treatment of intermittent or mild symptoms, the use of medications without a prescription – saves patient's time and unburdens health care system. This phenomenon, however, is a challenge for the public health sector. Actions must be undertaken which are aimed at raising consumers-patients' awareness regarding the dangers posed by improper use of OTC drugs.

**Keywords:** non-prescription drugs, self-treatment, OTC

## Introduction

Drugs available without a prescription are pharmaceutical agents that can be applied without doctor supervision. Most often they are purchased in pharmacies, supermarkets and petrol stations (Roguska, Feliksiak 2010). Most people when buying these drugs do not realize that there are health-related consequences of improper use of such pharmaceuticals. The adverse health and life impacting effects may be caused not only by an overdose, but also there is a possible occurrence of side effects and interactions with other consumed drugs (Światowy 2006). The most common reasons for the use of medications without a prescription include: pain relief and improvement of health condition. The choice of a medicament by the consumer is influenced by many factors. The most important of them include: economic, demographic, social and cultural factors (Czerw 2008).

Every year Poland experiences a growing number of sold non-prescription drugs. It is considered that the market of over the counter drugs (OTC) is one of the fastest growing segments of the pharmaceutical market. K. Krajewski-Siuda believes that "the market of non-prescription drugs comprises as much as a quarter (26%) of the value of the pharmaceutical market and it is relatively the highest value in Europe" (Krajewski-Siuda 2012). The value of income from the sale of OTC drugs in Poland since 1996 has increased from 1 to 4 billion compared to 2006 (Krajewska-Kułak et al. 2011). Subsequent reports show that in the year 2012 the market of OTC products in our country reached 8.93 PLN billion (www.pmrpublications.com). Central Statistical Office reports that in 2006, only 2% of households did not buy this type of pharmaceuticals (GUS 2011).

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The phenomenon of the mass acquisition of OTC drugs is associated with an increase in the wealth of Poles as well as an increased awareness of their own health (Paczkowska 2008).

The promotional tool within the OTC market is primarily advertising, aimed at both patients-consumers of drugs, as well as intermediary agents in the process of purchasing these drugs. The decisions which drugs to purchase without a prescription are also affected by other factors such as the pharmacist's advice, as well as the effectiveness of the benefits offered in the form of lower prices or certain drugs and the possibility of obtaining free samples.

The wide availability of OTC drugs carries the risk of their excessive use, leading to the phenomenon of addiction to medication.

The pace of life in recent years causes the use of drugs without prescription by many people being an alternative to a visit to a doctor. Their excessive use is becoming a dangerous phenomenon for the health and life of people. The most frequently applied group of commonly available pharmaceuticals are non-steroidal anti-inflammatory drugs (NSAID). It is estimated, according to Kuźniar-Placek et al. (2012) that as a result of complications associated with the improper use of NSAIDs there are approx. 3 000 deaths per annum in Poland (Kuźniar-Placek et al. 2012).

The use of non-prescription drugs has become particularly threatening among young people. Sedatives and hypnotics used without prescription are – after cigarettes, alcohol, and marijuana -the most prevalent abusive substances among young people. Studies carried out so far regarding the use of non-prescription drugs mainly focused on the elderly, but there is little data on patterns of the consumption of these drugs by young people (Woynarowska, Mazur 2011).

The purpose of this study was to investigate the effects of the use of OTC drugs among young people from the voivodeship of Silesia.

#### Material and methods

The study group consisted of 180 people aged 18 to 30 living in the Silesian Voivodeship. The conducted study involved 115 women and 65 men. Among the 180 respondents, 75% lived in the city, and 25% inhabited rural areas. Education of respondents is as follows:

- higher education: 100 people,
- vocational education: 50 people,
- secondary education: 15 people,
- basic education: 15 people.

The research method within this study was a survey, while the research technique-a questionnaire. The respondents covered by the author's anonymous questionnaire gave answers to questions about applying medications without a prescription.

### Research results

Among those who took part in the study, 85% stated that they do not suffer from chronic diseases (153 people). Other people (15%) require continuous treatment (27 people). Very good health condition was declared by 31% of people, while a good condition was indicated by 57% of respondents (figure 1).

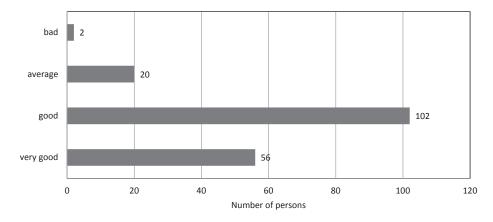


Figure 1. State of health of the respondents in their subjective opinion

Use of medicines without a prescription is declared by 91% of the respondents (164 people). Only 9% of those participating in the study acknowledges that they do not accept this type of medication (16 people) (figure 2).

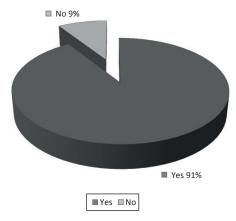


Figure 2. The use of medicines without prescription (OTC) by respondents

Frequency of use of medicines without prescription by the respondents is presented by figure 3.

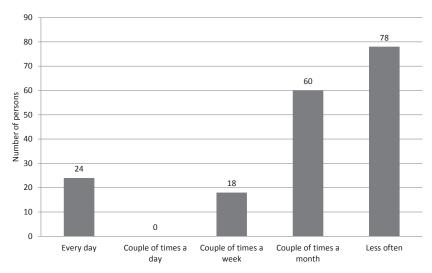


Figure 3. Frequency of use of medicines without prescription by the respondents

Most often selected by the respondents groups of pharmaceuticals are painkillers (69%) and vitamin supplements (59%). The respondents were least likely to apply slimming preparations (figure 4).

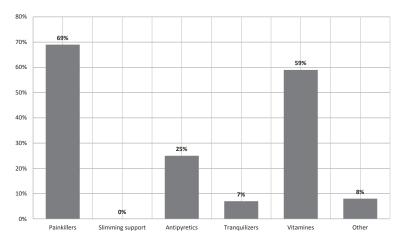
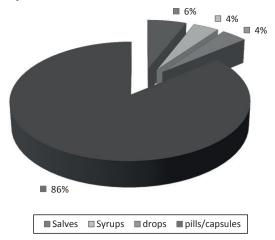


Figure 4. Groups of drugs applied by the respondents

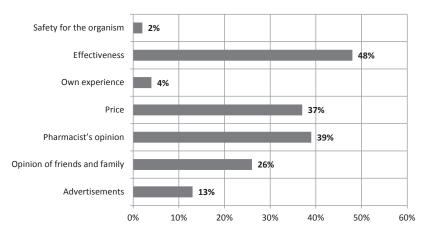
The most preferred form of drug among the recipients are the pills. This answer was selected by 86% of the researched (155 persons) (figure 5).



**Figure 5.** The form of drugs chosen by the respondents

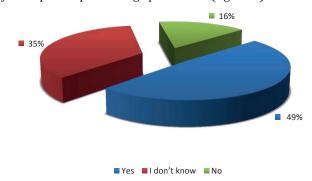
The application of OTC medication in doses greater than it is recommended in the leaflet is indicated by 20% of the respondents (36 people). The vast majority of respondents (80%) do not exceed the recommended dose (144 people). 13% of respondents experienced side effects after taking the drug without a prescription (23 people). Other people have not experienced any negative symptoms after use of OTC drugs (87% - 157osób).

When analyzing the determinants influencing the decision to purchase OTC drugs by the respondents it was noted that the respondents are persuaded first by its effectiveness (48%). The opinion of the respondents is also a pharmacist is also important for the respondents (figure 6).



**Figure 6.** Determinants impacting the decision of purchasing OTC drugs by respondents

What raises concern is the fact that among half of the respondents there are individuals who feel that OTC medicines are safer for the body than prescription drugs purchased (figure 7).



**Figure 7.** Answer of the respondent to the question "Do you think that medicines without prescription are safer for your organism than drugs prescribed by a doctor?"

#### Discussion

The use of OTC is becoming a mass phenomenon. The researched persons are young people (18-30 years old) and their use of the drugs without prescription is quite common. Respondents admit that their health condition is satisfactory, and at the same time it is not a contraindication to the use of OTC drugs. It is difficult to compare the incidence of OTC medicines use by patients, as the authors of similar works differently define the concept of frequency. Work by Pączkowska contains a subjective term "often", "very often" (Pączkowska 2008). Whilst Wolano suggests that most respondents are taking medicines without a prescription once a month (45%) (Wolano 2012). In this study, respondents most frequently responded that OTC medication are used by them at least a few times a month (43%). When analyzing the results of the forms of drugs preferred by the respondents, it was noted that these were the tablets. This information is confirmed in the work of Kasperczyk et al. (2007).

A significant proportion of respondents considered applying pharmaceutical drugs without a prescription as less dangerous for the body than drugs prescribed by a doctor. Part of the respondents admit to exceeding the recommended dose. Side effects of using OTC drugs occurred in 13% of subjects, a similar result was obtained in the study of Wolano -15.71% (Wolano 2011).

The danger of OTC medication use involves the simultaneous adoption of preparations from the same class of drugs (even in the amounts indicated in the package leaflet). Patients often unknowingly exceed the acceptable amount of a particular substance. This is for example in the case of analgesics and antiphlogistics which contain ibuprofen, naproxen, acetylsalicylic acid or diclofenac applied also for self-treatment of colds. These preparations belong to the group of non-steroidal anti-inflammatory drugs (NSAID). Simultaneous use of several painkillers containing these substances most often does not produce synergistic effects, but it creates a huge risk of nephrotoxicity or hepatotoxicity and may lead to an imminent threat to the life of the patient. Extensive information is provided within the work presented by Woroń J. (Woroń 2012) and within the article by Hartman M. (Hartman et al. 2012).

In 2007, three people with severe bone marrow were admitted to the Katowice Hematology Clinic. Doctors confirmed that the health status of patients was the result of long-term, excessive use of analgesics. Patients who were admitted to the Clinic were all under 30 years of age, one of them died (Walewski 2010).

The above information is important due to the fact that according to the research carried out by the authors the respondents most often chose analgesics, antipyretics and vitamin supplements from the OTC groups of drugs. Similar results are provided by the work by Ruohola et al. (2009) as well as studies exploring the Polish market of OTC drugs (Paczkowska 2008, Wolano 2012; Wdowiak et al. 2006).

An important problem of the use of non-prescription drugs may be masking the fact of serious, life-threatening diseases. OTC formulations used are often effective to alleviate pain, which can be a symptom of chronic diseases, which unchecked, may lead to death (Szkolnicka 2005).

Despite the risks posed by improper use of OTC drugs, it is worth noting that, according to the WHO, their reasonable application effectively relieves the health care system, raises the level of use of vitamin supplements used prophylactically, thereby increasing the awareness of health prevention (WHO 2000).

Both drugs purchased without a prescription and those issued on prescription ought to be used in accordance with the product leaflet. An important and often underestimated role in case of doubt of the patient is played by the advice taken from the pharmacist.

### **Conclusions**

The phenomenon of medication use among the respondents is very common. Respondents admit to consuming higher doses of medication than it is recommended in the package insert of the drug, which may pose a threat to their health and even to their life.

## **References:**

- 1. Czerw A. (2008), Satysfakcja i lojalność klienta na rynku farmaceutycznym. Wyd. CeDeWu, Warszawa, s. 13-15.
- 2. Główny Urząd Statystyczny (2011), *Informacje i opracowania statystyczne*. Wydatki gospodarstw domowych na ochronę zdrowia, W: Ochrona zdrowia w gospodarstwach domowych w 2010 r. GUS, Warszawa, s. 56-68.
- 3. Guidelines for the Regulatory Assessment of Medicinal Products for use in Self-medication (2000), WHO, Geneva, http://apps.who.int/medicinedocs/en/d/Js2218e/, (30.04.2014).
- 4. Hartman M., Lichtański P., Klimacka-Nawrot E., Donocik K., Błońska-Fajfrowska B. (2012), *Wpływ reklamy na asortyment leków stosowanych na przeziębienie.* W: Krajewski-Siuda K., Samoleczenie. Wyd. Instytut Sobieskiego, Warszawa, s. 225-234.

- 5. Kasperczyk J., Jośko J., Klimasara J. (2007), *Zjawisko samoleczenia wśród studentów wybranych kierunków studiów*. Probl Hig Epid, nr 88 (2), s. 206-209.
- 6. Krajewska-Kułak E., Ortman E., Moczydlowska A., Van Damme-Ostapowicz K., Rozwadowska E., Lewko J. i wsp. (2011), *Radzenie sobie z dolegliwościami w drodze samoleczenia w populacji studentów Uniwersytetu Medycznego w Białymstoku*. Probl Hig Epidemiol, nr 92(3), s. 486-496.
- 7. Krajewski-Siuda K. (2012), Samoleczenie. Wyd. Instytut Sobieskiego, Warszawa.
- 8. Kuźniar-Placek J., Szponar J., Panasiuk L. (2012), *Toksyczność leków przeciwbólowych w praktyce lekarza rodzinnego*. Prz Lek, nr 69(8) s. 561-564.
- 9. Pączkowska M. (2008), *Korzystanie z leków i ich dostępność*. Warszawa: Raport z badań CSIOZ; 2008: 1-30, http://www.csioz.gov.pl/publikacja.php?id=4, (20.12.2013).
- 10. Roguska B., Feliksiak M. (2010), *Stosowanie leków dostępnych bez recepty*. CBOS, Warszawa, s. 1-17, http://www.cbos.pl/SPISKOM.POL/2010/K\_143\_10.PDF, (28.01.2014).
- 11. Ruohola A., Waris M., Allander T. (2009), *Viral etiology of common cold in children.* Finland. Emerg Infect Dis, nr 15(2) s. 344-346.
- *12. Rynek produktów OTC w Polsce* (2013), www.pmrpublications.com/product/Rynek-produktow-OTC-w-Polsce-2013, (28.04.2014).
- 13. Szkolnicka B. (2005), *Leki na receptę i dostępne bez recepty jako przyczyna prób samobójczych i niezamierzonych nadużyć badania wstępne.* Przeg Lek, nr 62(6) s. 568–571.
- 14. Światowy G. (2006), *Zachowania konsumentów. Determinanty oraz metody poznania i kształtowania*. Polskie Wydawnictwo Ekonomiczne, Warszawa, s. 58-64.
- 15. Walewski P. (2010), Na ratunek. Gaz Farm, nr 5, s. 18-21.
- 16. Wdowiak L., Lang B., Bojar I. (2006), Samoleczenie kto kupuje leki OTC w Polsce? Zdr Publ, nr 116(4) s. 578-582.
- 17. Wolano M. (2012), *Zjawisko samoleczenia wśród wybranych grup społecznych Rzeszowa i okolic.* Pol Prz Nauk Zdr, nr 30(4) s. 302-309.
- 18. Woroń J. (2012), *Leki stosowane w samoleczeniu bezpieczeństwo stosowania, niekorzystne interakcje.* W: Krajewski-Siuda K., Samoleczenie. Wyd. Instytut Sobieskiego, Warszawa, s. 121-128.
- 19. Woynarowska B., Mazur J. (2011), *Zdrowie i zadowolenie z życia*. W: Mazur J., Małkowska-Szkutnik A. (red.), Wyniki badań HBSC 2010. Raport techniczny. Instytut Matki i Dziecka, Warszawa, s. 68-85.

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