

DANGERS OF ONLINE SELF-MEDICATION

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Abstract

Self-medication and excessive drug consumption present high risk of getting a disease such as drug poisoning, functional disorders, serious allergic reactions. At the same time, the overuse of drugs without medical advice presents the risk of not discovering severe diseases in time. At the first symptoms of a disease, patients administrate themselves the drug they think they need, without seeking the advice of a doctor or of a pharmacist and order online certain drugs or food supplements. The dangers behind online orders are huge.

Key words: self-medication, overuse of drugs, online orders

INTRODUCTION

Drug online ordering platforms have grown in number so that one can place a drug order and receive confirmation within 48 hours. For drugs available without prescription the order can be delivered at home and for those that need prescription patients are expected to pick them up at the pharmacy. Once patients prove the pharmacist they have a doctor's prescription for that drug, they can pay for it and pick it up (Szekely Pal, et al.2015). Individuals and health institutions have the possibility of buying drugs that are not approved in Romania, but are approved and legally distributed in another EU state, without jeopardizing patients' health, by the possible sale of inappropriate products. In justified cases, when patients cannot go to the pharmacy, the sale of drugs online is useful if there is an online communication between the pharmacist and the patient (Law no. 81 from 1997). Due to the lack of communication between pharmacist and patient, most often it is difficult to collect and assess the information on the side effects of pharmaceuticals, on the pharmacovigilance activities (Deontological Code 2005), on early detection of side effects and interactions of pharmaceutical products (Szekely Pal, et al.2015), on monitoring the frequency of known side effects, on identifying risk factors and fundamental mechanisms of side effects, on ensuring the continuity of product safety, on withdrawing from the market those products (batch/product series) that do not meet efficacy and safety standards (Barnett CW, et al.2000). There are Internet sites that have promoted and

marketed, to customers in Romania and abroad, counterfeit drugs such as anabolic steroids and hormones with a potential risk for people's health. Online orders aim to provide preferential prices, participation in special campaigns, personalized offers, product presentations, various gifts, an account manager, priority in processing and delivering orders, all these for more substantial sale profits.

The conducted study aimed to assess the consumption of drugs, medicinal products and food supplements purchased over the Internet by questioning patients and customers in community pharmacies.

MATERIAL AND METHOD

The study was conducted at the level of community pharmacies in Bihor County, Romania, using the questionnaire method. The aim was to assess the consumption of drugs and medicinal products purchased over the Internet. This questionnaire is totally structured, containing only closed-ended questions on a nominal or ordinal scale. The questionnaire consists of 22 items in the form of questions or statements. Responses are on different levels, ranging from closed-ended ones with questions on the nominal and ordinal scale to the open-ended, direct ones. The questionnaire in its form is divided into two sections. The first section contains questions related to the demographic data used to analyse results as well as more general questions. The second section contains the direct, subjective questions related to the actual online orders. The study included 408 patients from community pharmacies.

RESULTS AND DISCUSSIONS

236 of the respondents were female and 172 male, 241 from urban areas and 167 from rural areas. The distribution of respondents by gender is shown in Figure 1.

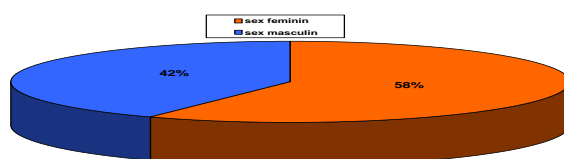


Fig. 1. Distribution of respondents by gender

The distribution of respondents by age groups is presented in Table 1.

Age group (years old)	Male		Female		Total	
	No.	%	No.	%	No.	%
18-34	83	45.85	98	54.15	181	44.31
35-59	62	43.97	79	56.03	141	34.55
≥ 60	27	31.38	59	68.62	86	21.14
Total	172		236		408	

The distribution of respondents by level of completed studies at the time of the questionnaire is presented in table 2.

Table 2.

Studies	No.	%
Middle school	77	19
Secondary school	155	38
Post-secondary school	90	22
University studies	88	21
Total	408	10

It was not surprising that respondents from the urban area ordered online, taking into consideration their higher level of use of a computer or greater accessibility to a computer. Similarly, those with a higher education level (38%), and better training in computer use, admitted having ordered drugs or supplements online.

The distribution by age groups of the people who have ordered drugs over the Internet is presented in Table 3.

Table 3.

Age group (years old)	Male		Female		Total	
	No.	%	No.	%	No.	%
18-34	33	63.41	20	60.64	53	62.35
35-59	12	25.11	9	27.24	21	25.70
≥ 60	7	11.48	4	12.12	11	12.95
Total	52	100.00	33	100.00	85	100.

Analysing the answers, 20.83% of the respondents (85 people) ordered drugs over the Internet. Most of them are men (63.41%), aged between 18 and 34. Of those surveyed only 123 (30.14%) are aware of the importance of buying drugs at the advice of a specialist. One may also notice that the younger generation (62.35%) resorts faster to online purchase of medicinal products even with the possibility of being counterfeit. From the point of view of age, the elderly (12.95%) face problems of online access, yet they consider online purchasing important as it is easier to obtain the desired drug.

The distribution by age groups of the people intending to order drugs over the Internet is presented in Table 4.

Table 4.

Age group (years old)	Male		Female		Total	
	No.	%	No.	%	No.	%
18-34	16	48.48	8	44.44	24	47.05
35-59	11	33.33	6	33.33	17	33.33
≥ 60	6	18.29	4	22.23	10	19.62
Total	33		18		51	100.00

The table above shows that male patients (33 people, 64.70%) are more interested in the purchase of drugs or food supplements without having sufficient information on the products, or accepting information given by the online order.

The distribution by age groups of people who do not intend to order drugs over the Internet is presented in Table 5.

Table 5.

Age group (years old)	Male		Female		Total	
	No.	%	No.	%	No.	%
18-34	5	25.00	13	30.27	18	28.57
35-59	3	15.00	16	37.20	19	30.20
≥ 60	12	60.00	14	32.53	26	41.23
Total	20		43		63	100.00

The results of the questionnaire show that female patients (43 people, 68.50%) are more cautious at the purchase of medicinal products that do not have sufficient information and have no intention of buying online. Reasons to resort to online orders of drugs and food supplements are presented in Table 6.

Table 6.

REASONS FOR ONLINE ORDER	18-34 years old				35-59 years old				≥ 60 years old				TOTAL	
	M	%	F	%	M	%	F	%	M	%	F	%	NO.	%
Ask a second opinion	4	20	6	30	2	10	5	25	2	10	1	5	20	23.42
Receive further information and data	3	16	5	27	3	16	5	26	2	10	1	5	19	22.35
Privacy	1	9	2	18	4	37	2	18	1	9	1	9	11	12.95
Fast delivery	2	16	1	8	3	28	2	16	2	16	2	16	12	14.23
Convenience	1	7	1	7	1	7	2	14	6	43	3	21	14	16.47
Lack of access to medical services (doctor, pharmacy)	1	11	2	22	1	11	3	34	1	11	1	11	9	10.58
TOTAL	12		17		14		19		14		9		85	100.00

Some of the reasons for seeking health information and ordering drugs over the Internet are: to get a second opinion on health issues and to receive further information on a disease and on its appropriate treatment (22.45%). Another factor that could influence the placing of online orders and the access to online drug and health information is certain people's wish

for privacy (12.95%). It is equally important the ease and promptitude (14.23%) of obtaining online drugs and information that has not been fully answered during a doctor's consultation. There are patients who would accept the use of methods or drugs even in experimental phase as to improve their health (cases of serious illness, with minimal chances of healing). During the study we noticed a connection between respondents' source of health information and their gender, age, level of education and area of residence. We noticed in the questionnaire that those with a higher level of education prefer to seek the doctor for health advice, as opposed to those who do not receive a similar educational background and who prefer to obtain this information from family members.

The possibility of obtaining health information or drugs over the Internet is appreciated by the elderly, which is understandable considering the convenience (16.47%) and lower mobility of this category of persons. The lack of access to healthcare services in rural areas where the presence of family physicians is only sporadic (10.58%) led respondents who reside in these areas to consider the health information obtained over the Internet as clearer, more complex and handier.

The most commonly online ordered drugs or food supplements, in order of their importance, are presented in Table 7.

Table 7.

PRODUCTS ORDERED ONLINE	18-34 years old				35-59 years old				≥ 60 years old				TOTAL	
	M	%	F	%	M	%	F	%	M	%	F	%	N R.	%
1. Products for muscle growth	14	50	-	-	6	30	-	-	-	-	-	-	20	23.52
2. Products for improved sexual performance	8	28	-	-	8	40	-	-	1	100	-	-	17	20.02
3. Products for losing weight	1	4	6	34	2	10	5	30	-	-	1	50	15	17.55
4. Products for improved intellectual performances	3	11	3	18	3	15	4	23	-	-	-	-	13	15.31
5. Childcare products	-	-	5	30	-	-	6	35	-	-	1	50	12	14.10
6. Products for hair growth and body care	2	7	3	18	1	5	2	12	-	-	-	-	8	9.50
TOTAL	28	-	17	-	20	-	17	-	1	-	2	-	85	100.00

The mostly online ordered drugs or food supplements are products for muscle growth, such as anabolics, various steroids and hormones, purchased especially by young people (23.52%). If the above mentioned products are misused, with no medical recommendation or supervision, they can cause multiple side effects, ranging from overburdening of the liver to liver neoplasm, acne, seborrhoea, hypertension, cardiac ischemia, cardiac

arrest, or aggressivity. Products for improved sexual performance (20.02%) are also among the most requested online orders. Medical history and physical examination are advised before the use of sexual enhancers because sexual activity is associated with a degree of cardiac risk, which is why it is necessary for a physician to evaluate patients' cardiovascular status. Products for weight loss (appetite suppressants) are ordered primarily by women (30%, 34%), but even in this case the risks are high as these products can alter the overall and hormonal metabolism causing bad side effects such as nausea, constipation, sleep disturbances, dizziness, drowsiness, headache, flushing, muscle pain. Patients can gain weight very quickly after stopping the treatment. Childcare products are accessed by young mothers (30%, 35%), but even grandparents order them for their grandchildren (1 person). Online orders for body care and hair products are commissioned especially by young women aged between 18 and 34 (18%).

CONCLUSIONS

Drugs or food supplements ordered online can be aggressive for people's health without proper information as people can order products that are qualitatively and quantitatively inadequate.

It is necessary to have an efficient communication within the physician - patient - pharmacist triangle in order to educate people on the possible dangers of self-medication.

Contraindications, drug interactions, possible side effects listed in the prospectus received with an online order must be repeated and pointed out for the patient, if necessary, by specialists before using the drug.

The growing aggressivity of online order proposals can lead to serious functional health disorders as people are lured by the offers of this way of purchasing drugs that are unknown, untested, perhaps particularly harmful, even counterfeit and represent potential health hazards.

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