

ATTITUDE OF MEDICAL STUDENTS FOR TAKING DRUGS: PROBLEM OF IRRESPONSIBLE SELF-TREATMENT

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Summary. The problem of irresponsible self-treatment among future doctors was argued according to the survey of 1305 medical students studying in 4th course of higher educational medical establishments from different regions of Ukraine. It was detected number of uncontrolled receptions of drugs depending on the place of study, sex and the degree of harm awareness from irresponsible self-treatment.

Keywords: irresponsible self-treatment, medical students, drugs

Introduction. Recently, in terms of socio-demographic crisis in Ukraine, the conservation and enhancement of health of the younger generation, such as student's age, has become a subject of special attention [1,2]. Despite the extensive system of implemented measures at state and regional levels, official statistics and indicators of subjective well-being of students characterized by unfavorable trends. The main reasons for this situation considered insufficient interdepartmental integration of preventive measures, the impact of aggressive environmental factors, unhealthy lifestyle and irresponsible self-treatment [3,4]. Costs associated with complications due to improper take of drugs in many countries make up 15-20% of all funds that have been allocated to the health care system. Thus more than 50% of such complications resulting from irresponsible self-treatment or incorrect choice of drugs [5]. Meanwhile, in Ukraine in 2012 in five cases it was proved that the cause of death in patients were incorrect use of antibiotics that has caused the development of hypersensitivity reactions in patients; self-prescribed pharmacotherapy resulted lethally [6].

Therefore, we consider the problem of irresponsible self-treatment is one of the actual problems of today's world health. Especially significant is the issue among physicians, as in this case may be a combination of irresponsible acceptance with irresponsible

prescribing of drugs. The above defines the objectives, strategies and design of our study.

Aim of study. Study of sanitary and educational work among medical students and proving it necessity to solve the problem of uncontrolled acceptance of various drugs (D) (irresponsible self-treatment) among them.

Materials and methods. It was carried out sociological survey of 1305 medical students studying in 4th course of higher educational medical establishments (HEME) from different regions of Ukraine according to a specially designed single protocol. Sociological research conducted by random sampling. The minimum sample size was calculated according to the Glens' formula for each HEME based on total students enrolled in 4th course of medical faculty (or several medical departments) in the establishment. In each HEME we sent a questionnaire, whose number was 20% higher than the minimum required number. Later we received less than the number of questionnaires sent, but in all cases the number of questionnaires was sufficient for reliable analysis.

Thus, each selected sample was representative with error probability less than 5% ($p < 0,05$) and correlated with general sample by gender sign. The mean age of all samples ranged from 20.44 to 21.4 years. Table 1 shows the detailed characteristics of

Table 1. Descriptive statistics of the main parameters of the study

City, where located HEME	Total number of respondents	Mean age, (M±SD)	Proportion of males, abs. (%)	Proportion of females, abs. (%)
Vinnitsia	220	20,79±0,08	45 (20,45)	175 (79,55)
Lviv	243	20,44±0,10	92 (37,86)	151 (62,14)
Kyiv	234	20,98±0,11	50 (21,37)	184 (78,63)
Odesa	205	21,40±0,13	59 (28,78)	146 (71,22)
Sumy	205	20,50±0,07	73 (35,61)	132 (64,39)
Kharkiv	198	20,92±0,12	44 (22,22)	154 (77,78)

selected samples from analyzed HEME.

Based on primary data obtained in the course of the study it was created special electronic database. Later they worked out using the program Microsoft Excel, which is part of the package Microsoft Office, and the program Statistica 6.0. When performing statistical analysis of the data it was used the following methods: set of order statistics analysis, calculation of relative values and assessment of the likelihood of the results in the two groups.

All received set of order statistics were tested for normality of distribution using Epps-Palli criteria. Since this test showed Gaussian distribution pattern data, we used to describe each group of observations arithmetic mean and its standard deviation ($M \pm SD$).

Therefore, to assess the materiality of the means difference in the analyzed groups were used Student's criterion. However, when comparing the quality indicators were used Pearson Xi-square test. Results were considered reliable at a significance level $p < 0,05$.

The study was carried out not in order of physical or juridical persons. Conflict of interest in the course of the study was absent. Applied methods: system analysis and systematic approach, analytical and comparative, sociological (questionnaire), biostatistical.

Results and Discussion. The first stage of our work was to determine the proportion of medical students, who are not aware of the damage from uncontrolled receiving drugs depending on geography of HEME.

Established that the largest proportion of students who clearly declared that do not realize the damage from uncontrolled receiving drugs enrolled in Kharkiv ($7,07 \pm 1,82\%$ of the total number of respondents) and Sumy ($5,37 \pm 1,57\%$ of respondents) medical universities (table 2). At the same time found that the lowest proportion of students who claimed to recognize the damage from uncontrolled receiving drugs studied in Vinnitsia ($0,91 \pm 0,64\%$) and Kyiv ($1,71 \pm 0,85\%$) HEME.

Table 2. Levels of awareness for receiving damage from uncontrolled drugs by medical students depending on location of HEME

№	Location	Levels of awareness	Clearly aware of the damage	Hesitant to answer	Recognize that do not realize the damage
1.	Lviv		79,84±2,57	17,17±2,17	3,00±1,64
2.	Vinnitsia		78,18±2,78	20,91±2,74	0,91±0,64
3.	Kyiv		86,32±2,25	11,97±2,12	1,71±0,85
4.	Odesa		80,98±2,74	15,12±2,50	3,90±1,35
5.	Sumy		73,17±3,09	21,46±2,87	5,37±1,57
6.	Kharkiv		80,30±2,83	12,63±2,36	7,07±1,82

Table 3. Mean frequency of uncontrolled receptions drugs (per year) depending on location of HEME

	Lviv	Vinnitsia	Kyiv	Odesa	Sumy	Kharkiv
Mean frequency	1,30 ±0,13	1,81 ±0,15	4,41 ±0,19	1,52 ±0,17	1,84 ±0,16	2,04 ±0,20

Table 4. Distribution of respondents by gender and recognition of damage from irresponsible self-treatment among students of Danylo Halytsky LNMU

Levels of awareness and frequency of drugs acceptance	Men	Women	p
Recognize that do not realize a damage	5,22±1,74	1,99±1,14	<0,05
Hesitant to answer	14,35±2,13	18,54±3,16	<0,05
Clearly aware the damage	80,43±4,14	79,47±3,29	>0,05
Mean frequency of uncontrolled drugs acceptance (numbers per year)	1,05±0,21	1,45±0,17	>0,05

Later medical students were invited based on self-analysis to determine how often during the last year, they uncontrolled (without consulting doctor or pharmacist) taking drugs (table 3).

As the data in table 3 show, often – 4,41±0,19 times per year uncontrollable drug taking medical students enrolled in the Bogomolets National Medical University (BNMU) in Kyiv. The smallest multiplicity inherent to medical students of Danylo Halytsky Lviv National Medical University (LNMU) – an average of 1,30±0,13 acceptance per year. Disturbing the fact that, according to the survey in all HEME identified an average of at least once per year uncontrolled receiving drugs by medical students. This indicates, in our opinion, the existing problem of irresponsible self-treatment among future doctors.

Later we had conducted an in-depth analysis of the survey of students enrolled at the Danylo Halytsky LNMU (Table 4).

It was found that among male respondents is 2.5 times larger part (5,22±1,74%) of those states that do not recognize the damage from taking drugs compared with a similar proportion (1,99±1,14%) of the surveyed female students. However, the multiplicity of uncontrolled drugs receptions is slightly higher in females: 1,45±0,17 times per year vs 1,05±0,21 acceptance in men.

Therefore, women better understand the harmfulness of uncontrolled receptions drugs, but often perform these steps. This prompted us to scientific hypotheses about the possible impact of health on un-

derstanding and irresponsible self-treatment in medical students.

One of the issues that have kept in the developed questionnaire was to conduct self-assessment of own health by medical students. Distribution of analyzed issues related to recognition of irresponsible self-treatment depending on health status of respondents are presented in table 5.

We found that medical students who estimated their health as very poor had the best situation with uncontrolled intake of drugs. These respondents are acutely aware of the damage from irresponsible self-treatment and do not take drugs without prescription of a doctor. We believe that the primary in this regard is a disease that led to high level of awareness in sick future doctors and argued the need for controlled drug taking.

Established that medical students who estimated their health as good, significantly ($p < 0,05$) less uncontrolled taking drugs – 0,76±0,18 times per year, compared with students who estimated their health as satisfactory (1,60±0,20) and good (1,61±0,38 times per year). We believe that in this case the frequency of uncontrolled receptions of drugs directly related to the overall frequency of medication receptions: the worst health of medical student – the more he takes drugs, including uncontrolled.

The final stage of our study was to analyze the multiplicity of uncontrolled taking drugs depending on the level of awareness of the damage of such acceptance. The results are shown in table 6.

Table 5. Distribution of respondents by self-assessment of health and in the light of the recognition damage of irresponsible self-treatment by medical students of Danylo Halytskyi LNMU

Levels of awareness and frequency of drugs acceptance	Self-assessment of health status			
	Good	Satisfactory	Poor	Very poor
Recognize that do not realize a damage	2,20±0,61	4,41±1,76	4,35±4,25	0,00*
Hesitant to answer	22,20±3,61	12,50±2,84	21,74±8,60	0,00*
Clearly aware the damage	75,61±4,74	83,09±3,21	73,91±9,16	100,00*
Mean frequency of uncontrolled drugs acceptance (numbers per year)	0,76±0,18	1,60±0,20*	1,61±0,38*	0,00*

Note: * - significant difference ($p < 0,05$) compared with rates in group "good health status"

Table 6. The mean frequency of uncontrolled receptions drugs depending on the level of awareness of damage from self-treatment among medical students of Danylo Halytskyi LNMU

№	Levels of awareness	Mean frequency of uncontrolled acceptance of drugs (numbers per year)
1	Recognize that do not realize a damage	1,17±0,13*
2	Hesitant to answer	1,47±0,12*
3	Clearly aware the damage	2,47±0,18

Note: * – significant difference ($p < 0,05$) compared with in rates in group "recognize that do not realize a damage".

It was established that those medical students who are not aware of damage from self-treatment, taking drugs uncontrollably 2,47±0,18 times per year, which is significantly ($p < 0,05$) bigger compared with those surveyed students who are acutely aware of the damage or are undecided with the answer. Thus, we believe that educational work with medical students regarding awareness of damage from self-treatments can negotiate lower incidence of uncontrolled receptions drugs.

Conclusions:

- The results of our study showed a problem of irresponsible self-treatment among future doctors: according to sociological questionnaire in all HEME that were included in the analysis determined an average of at least once per year uncontrolled receiving of drugs by medical students.
- Among male respondents is 2.5 times larger share (5,22±1,74%) of those states that do not recognize the harm of a taking drugs compared with a similar proportion (1,99±1,14%) of female respondents. However, the multiplicity of uncontrolled receptions drugs is slightly higher in females: 1,45±0,17 times per year vs 1,05±0,21 receptions in men.
- The best situation with uncontrolled intake of drugs was detected among medical students who estimated their health as very bad. These respondents are acutely aware of the damage from irresponsible self-treatment and do not take their drugs without doctor's prescription.
- Medical students who estimated their health as "good", significantly ($p < 0,05$) less uncontrolled taking drugs – 0,76±0,18 times per year, compared with students who estimated their health as "satisfactory" (1,60±0,20) and "poor" (1,61±0,38 times per year).
- Medical students who are not aware of damage from self-treatment taking drugs uncontrollably 2,47±0,18 times per year, which is significantly ($p < 0,05$) bigger compared with those surveyed students who are acutely aware of the damage or undecided with the answer.
- We believe that there is a real need for sanitary and educational work with medical students regarding awareness of the damage and solve the problem of uncontrolled receiving drugs that group of population.

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