



Non-steroidal anti-inflammatory drugs use among university students in Ardabil City, 2014

Fariba Kahn moueiaghdam¹, Esmail Farzaneh², Behzad Skandaroghli³, Afshin Fathi⁴

¹Department of Gynaecology & Obstetric, School of Medicine, Ardabil University of Medical Sciences, Ardabil, Iran, ²Department of Forensic Medicine and Toxicology, Ardabil University of Medical Sciences, Ardabil, Iran, ³Department of Surgery, School of Medicine, Ardabil University of Medical Sciences, Ardabil, Iran, ⁴Department of Paediatric, School of Medicine, Ardabil University of Medical Sciences, Ardabil, Iran

Address for correspondence:

Esmail Farzaneh,
Department of Forensic
Medicine and Toxicology,
Ardabil University of
Medical Sciences, Ardabil,
Iran. E-mail: e.farzaneh@
arums.ac.ir

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ABSTRACT

Background: Non-steroidal anti-inflammatory drugs (NSAID's) are the common drugs used for acute and chronic pains. Excessive and inappropriate use of these medications can be having many side effects on youth and students' health in the future. **Objective:** The objective of the study was to determine the rate of NSAID's use among university students. **Materials and Methods:** This descriptive cross-sectional study has been done on 400 students selected randomly from Ardabil City Universities. Data were collected by a questionnaire and then analyzed by statistical methods in SPSS 19. **Results:** Of all participants, 68% were male and rests of them were female. Of all students, 68.3% were in the age group of 20 through 25 and 62% of students were from medical university. From them, 69.3% had awareness about the NSAID's. The prevalence of NSAID's use among students was 68%. The most common causes of NSAID use was headache (38.3%) in the form of gelofen with 36.3%. **Conclusion:** According to the high prevalence of NSAID use between students (68%), doing more studies in future about notification educated class and youths toward contaminations of uses NSAID's and decreasing rate of use and better medical behaviors is necessary.

KEY WORDS: Arbitrary use, Ardabil, behavior, non-steroidal anti-inflammatory drugs, students

INTRODUCTION

An effort to rationalize drug use is an important principle in drug policy. According to the World Health Organization guideline for the rational use of drugs, we require to the use of drugs with therapeutic effect in a specific geographic area to meet the clinical needs of patients with minimal cost and side effects [1,2].

Now indiscriminate and unnecessary use of medications by the community is one of the major concerns of all countries, which caused many medical and economic problems [3].

Despite various attempts to rational drug use, irrational drug use is including still as a threat to the public health community [4,5].

Non-steroidal anti-inflammatory drugs (NSAID's) are drugs, which used arbitrary without doctor prescription for any pain in any age groups. The most important of these drugs are ibuprofen, naproxen, mefenamic acid, diclofenac and gelofen [6,7].

Self-medication in the country has become a bad habit, and this bad habit turn Iran to become the world's second largest consumer after China.

According to the results of studies, arbitrary use of NSAID's between university students in Iran were more than 83%, Turkey 45%, Islamabad 42% and Karachi 76% [8-10].

Because of higher rate of NSAID's use between university students and for prevention the rate of this arbitrary use among them, the aim of this study was to investigate the rate of NSAID's use among Ardabil University students.

MATERIALS AND METHODS

This descriptive cross-sectional study has been done on 400 students, which randomly selected from Ardabil Universities. Necessary data were collected by interview with students and completing the questionnaire, which include information such as sex, age, marriage, education, use of NSAID (in any dose) or other drugs and their knowledge about NSAID's. Collected data were analyzed by descriptive and analytical, statistical methods in SPSS 19. The $P < 0.05$ set as significant.

RESULTS

In this study, 68% of students were male, and 68.3% were in age group 20-25 year. 82.5% of them were single, and 59% were from Ardabil city. 62% of students were from medical and rests of them were from non-medical universities. 26.3% of students were in higher degree of education, and 90% of them were in university more than 1 year. 43% of student's families were in moderate economic level, and 12.8% of student's parents were illiterate. Of all, 69.3% have awareness about NSAIDs, and 68% had been used from NSAIDs. Most of the students used NSAIDs by doctors recommend and 25% used by their own decision [Figure 1].

Most of the students was taken medicine for treatment headache (28.3%), and 34.5% of them had not any specified pattern for use. Of users, 69.4% only take a tablet in time of NSAID use [Figure 2].

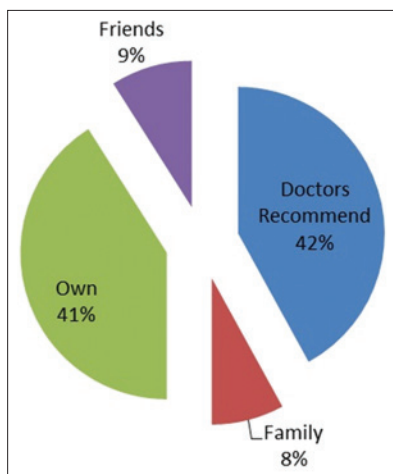


Figure 1: Incentives for use of non-steroidal anti-inflammatory drugs by student's idea

Most of students used gelofen (36.3%) [Figure 3] and 9.3% suffering from a disease. 24% of all students used other drugs apart from NSAIDs. 49.2% of students weren't aware of NSAIDs side effects.

About 36% of all students have side effects after NSAIDs use, and most of them have gastrointestinal symptoms (47.2%) [Figure 4].

About 44.8% of students haven't any awareness about herbal drugs and 82.5% of them agree with using herbal drugs. There weren't any significant relationship between use of NSAIDs and sex, age, marriage, residence place, beginning year to university, drug side effects and family income but there was a significant relation between kind of university (medical or non-medical) and NSAIDs use as the rate of NSAID's use in medical students significantly more than others ($P = 0.003$).

DISCUSSION

In this study, the rate of NSAIDs use between students was 68%, which was similar to other studies in Iran [11].

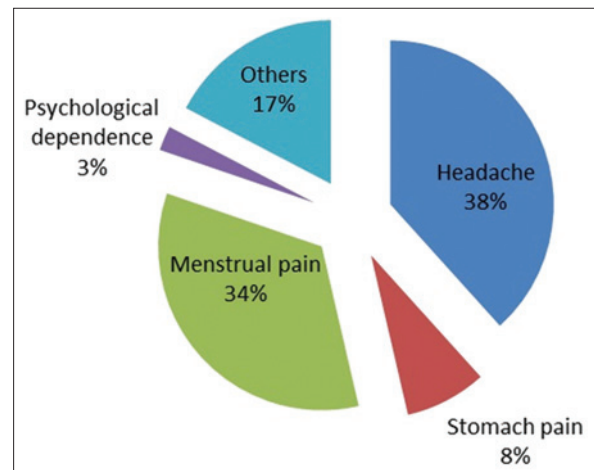


Figure 2: The rate of causes for using non-steroidal anti-inflammatory drugs by students

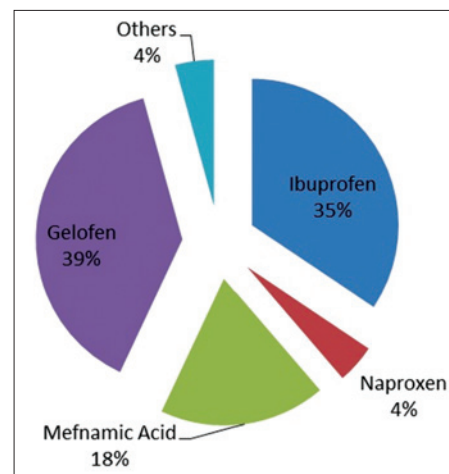


Figure 3: Type of used non-steroidal anti-inflammatory drugs by students

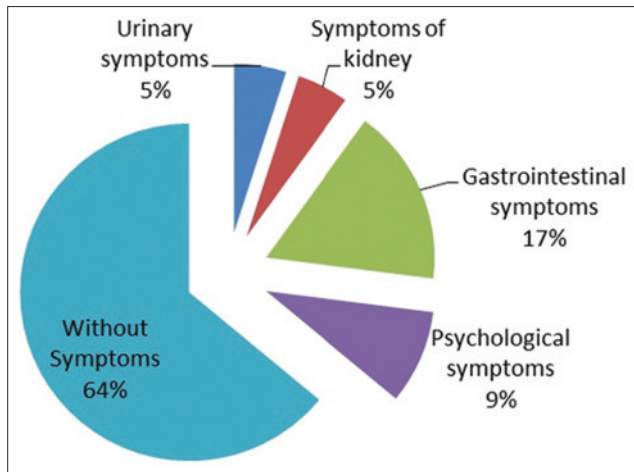


Figure 4: Frequency of symptoms in students after use non-steroidal anti-inflammatory drugs

High rate of self-medication in addition to increasing side effects, risks and drug interactions can lead to negative attitudes toward the rational treatment of diseases in the community. Maintenance medication at home believed to be safe self-medication, not having enough time to see a doctor for solving the problem and delivered by the pharmacy without prescriptions most important factors in the self-medication. Furthermore, we can say that economical factor has a main role in provide and higher uses rate of NSAIDs by students which was similar with other studies [12,13].

Non-medical students are often referred for treatment to traditional doctors and were used traditional and herbal medicines. In Klemenc-Ketis *et al.* study, the rate of drug arbitrary use in non-medical students were high and also, this rate in 1st year medical students was more than others [14].

It seems uncertain of the quality of medicines and prefers foreign drugs to Iranian productions, is the main factors in the use of NSAID drugs among students.

Thus, increasing the quality of manufactured drugs plays an important role in increasing trust in the medical community and patients avoid taking drugs out of the cycle of distribution [15].

James *et al.* showed that provide advice on the use of drugs by a pharmacist and reduction medical tariff has an effective role in reducing self-medication [16].

High level of self-medication among students can spread self-medication among people and society; Therefore, it is necessary to design and doing programs in University for decreasing the uses rate of NSAID's among students.

There was a significant relation between drug arbitrary use and sex because girls were proceeding to the NSAID use more than boys.

As the use of NSAIDs without doctor prescription in females was twice more than male (64.5% vs. 35.5%). In some studies,

use of NSAID's in boys was more than girls [8,17] and in some studies the result was the opposite [11,15].

The difference with other studies may be related to the number of samples and also more girls than boys because of the psychological condition of girls compared to boys. In this study, 68.3% of students were in age group 20-25, which were different with other studies. The difference can be resulted to many factors such as cultural differences, life-style and economical and social factors. In our study, the most of non-medical students use NSAIDs, which was similar to other studies [18-20]. Furthermore, 42% of students were proceed to NSAID use the doctor's advice and 40.7% by own decision. Since doctors can be a model for public health behaviors so, it was necessary that all doctors inform society people on the use of NSAID drugs and their side-effects and to reduce the possibility of advertising on self-medication. The type of disease, the most common type of drug NSAID, used to treat headache, which was different to other studies [18-20].

CONCLUSION

Because the students are faced with various stressors, including payment of fees, educational issues, cultural issues, lack of hope for the future, school pressures, new way of life, change in sleep and waking time, living in a dormitory, and the lack of recreational facilities, parental expectations of their progress, exams and homework, these factors can play an important role in the onset of mental illness and uses NSAID drugs among students. Learn more people and students with NSAID drugs using different methods of information are necessary and inevitable.

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