

Adolescent Drug Misuse in the Canton of Sarajevo

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Introduction

Adolescents are commonly considered to be a population group that is prone to drug misuse and abuse. According to the US National Institute on Drug Abuse (2014), the most frequently abused medicines among teens are amphetamines, prescription painkillers, cough medicines, sedatives, and tranquilizers. In addition to health reasons, the most prevalent reasons for drug misuse in adolescents are stress, fatigue, boredom, curiosity, increasing their reputation, or simply to feel good or better (Butorac et al., 2011).

Materials and methods

An original questionnaire was designed for research purposes, with open-ended and closed-ended questions. Participants were informed with the study aim and their rights within the research. The survey was conducted online, via Google forms platform.

A total of 528 questionnaires were collected during research. Inclusion criteria were that the age of the participants was between 11 and 21 years old, and that the participants reside in Sarajevo Canton. Out of 528 questionnaires, 84 did not meet the inclusion criteria. Data was obtained and analyzed from 444 questionnaires that did comply with the inclusion criteria. Statistical analysis was done using the methods of descriptive and inferential statistics. Statistical analysis was done using the following programs, Microsoft Excel 2010 and IBM SPSS Ver. 23.0.

Results and discussion

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Of the total of 444 participants included in the study, 122 (27.5%) were males and 322 (72.5%) were females. The participants were divided into two subgroups: elementary and high school students; and university students. Out of 444 participants, 202 (45.5%) were elementary and high school students, while 242 (54.5%) of the participants were university students.

Significant number of participants 400 (90.1%) have stated that they have used drugs, while 44 (9.9%) have not. The five most common used groups of drugs were non-opioid analgesics, antibiotics, dietary supplements, antihistamines, and benzodiazepines. The prevalence of benzodiazepine use was 7.1%, which is a bit higher than the European average of 5.6% reported by Perlmutter et al. (2018). Among students in Zadar, the most commonly used drugs were non-opioid analgesics and anxiolytics, but also the antidepressants, which was not the case with adolescents in Sarajevo (Butorac et al., 2011).

Out of 352 participants who have stated which drugs they have been using, 81 (23.0%) participants were using the same generic drugs under different brand names. The most frequent of these was paracetamol, whereas some participants used 4-5 different medicines, all of them contained paracetamol. Lee et al. (2017) reported that the participants within their study had the lowest confidence in telling health providers whether the medication they were taking contained paracetamol.

A total of 171 elementary and high school students stated the reasons for drug use. The most frequent reason was sickness (67.8%), then mild to moderately strong pain (56.7%), being overwhelmed with problems (14.0%), need for tranquility (10.5%), contraception (2.3%), leisure (1.2%) and other (2.9%). A total of 224 university students stated their reasons for drug use. Mild to

moderately strong pain (75.9%) was the most common reason for drug use, followed by sickness (37.5%), being overwhelmed with problems (11.2%), need for tranquility (8.5%), leisure (0.9%), contraception (0.4%) and other (2.2%). Butorac et al. (2011) concluded that the most frequent reason for drug use among high school students in Zadar was leisure and tranquility (above 50%), while university students mostly used drugs due to being overwhelmed with problems (43.3%). Different questionnaire formats might explain these different results, e.g., mild to moderate pain was not distinguished in the research conducted by Butorac et al. (2011).

What is concerning is that out of 106 participants who exclusively use OTC drugs, 40 (37.7%) participants do not read the Patient Information Leaflet (PIL). Moreover, out of 49 participants who self-medicate, without consulting their doctor or pharmacist, 20 (40.8%) do not read PIL. One would expect that these groups would have the highest prevalence of reading drug instructions, since they have not consulted with medical professionals, but within this cohort they had the lowest prevalence of reading instructions. This prevalence was substantially higher than the 10.1% reported by Lee et al. (2017).

Out of 271 (67.9%) participants who answered whether they have had drug side effects, 60 (15.0%) participants have stated they have experienced side effects, while 68 (17.0%) participants were not sure. Of 60 participants who have experienced side effects, 7 (11.7%) participants have not reported them to anyone, including their family. Gualano et al. (2014) have reported the side effect prevalence of 31.1% for women and 19.6% for men, which is a bit higher prevalence than in this research, but it has to be considered that 17% of participants were not sure if they have had side effect, thus the prevalence might be closer to the one reported by Gualano et al. (2014).

Out of 398 participants who stated whether they have concurrently used different drugs, 126 (31.7%) answered they had used 2 or more drugs simultaneously. Out of 90 participants who have stated which drugs they have used, 20 (22.2%) participants had increased risk of potential drug-drug interactions (DDIs). Qato et al. (2018) have also reported the use of combinations with potential major DDIs of almost 20% among adolescent girls.

Out of 399 participants who answered whether they drink alcohol with drugs, 35 (8.8%) participants have drunk alcohol at least once while using drugs. A total of 28 participants have stated which drugs they were taking with alcohol. Most frequently used drugs were non-opioid analgesics (67.9%), benzodiazepines (17.9%), antibiotics (14.3%) and antiulcer drugs (10.7%). Of the total number of 28 participants, only 1 participant was not under the risk of drug-alcohol interaction.

A total of 191 (48.1%) participants expects the pharmacist to be the main source of drug information, 146 (36.8%) the doctor, 22 (5.5%) the family, 18 (4.5%) the Internet, and 4 (1.0%) the other sources. Lee et al. (2017) have also reported the pharmacist to be the main source of drug information, followed by parents, PIL, other medical professionals, teachers, and friends.

Conclusion

It can be concluded that the adolescents incorporated in this study were under severe risks of drug side effects, drug-drug interactions, drug-alcohol interactions, developing tolerance and addiction, overdose, and even death, due to their reckless, uncontrolled and excessive misuse and abuse of drugs. Nevertheless, if taken into consideration that 85% of adolescents expect the medical professionals to be the main source of drug information, it is up to these professionals, especially pharmacists, to advise adolescents on appropriate drug use and forewarn them on potential dangers of drug use.

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