Petr Kachlík

ADDICTIVE BEHAVIOR OF FULL-TIME STUDENTS AT MASARYK UNIVERSITY AND OPTIONS IN ITS PREVENTION

Masaryk University
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Dedicated to the memory of my parents

Brno, September 2016 Petr Kachlík

Introduction

MOTTO

If you see a noble man,
try to emulate him;
if you see a bad man,
look into your conscience.

Confucius

The period between adolescence and adulthood is related to higher prevalence of substance abuse and addictive behavior, people want to try new and hitherto unknown things, test their own limits (SAMHSA, 2007). Changes in political and economic conditions, modern information and communication technologies, miniaturization and portability, acceleration of life pace, increased pressure on work performance, frequent occurrence of stressful situations and the need for rapid relaxation bring a whole range of problems that can be solved in facile ways, for example by using addictive substances or activities that involve addictive behavior (Kachlík and Klech in Řehulka, 2010).

Studying at the university frequently falls within the age period of 18–25 years and this period is considered to be a specific developmental period, filled with dynamism and instabilities, qualitatively different from adolescence and early adulthood. Typical characteristics of university students and people just after graduation include experimenting and exploring their own identity, especially in the area of employment and relationships. They seek their own ways, consider various housing and employment options, they establish new relations (Arnett, 2000; Arnett, 2005).

After admission to university, young people mostly escape the direct influence of their parents, but are not yet integrated into the bonds of their own family and employment, they have increased personal immunity syndrome and self-esteem and therefore they may not realize the negative consequences of their actions, or they do not realize them fully and early enough. Experiments with addictive substances in this period are generally tolerated and it is therefore considerably difficult to distinguish between individuals who use them transiently and those who will continue and develop a harmful habit in adulthood (Arnett, 2000; Arnett, 2005).

Stressful moments at university include problems with adaptation to a different life routine that places high demands on autonomy, accountability, effective planning and use of time, the ability of the young person to concentrate and relax. After graduation, young professionals look for work and, increasingly, their potential employers take into account, apart from the quality of educational achievement and personality characteristics, also possible candidate's issues with addictive substances, including alcohol and tobacco (Kachlík and Havelková in Řehulka et al., 2008c; Vondráčková et al., 2009).

Model of a university educated specialist forms a part of the standard of values, beliefs and attitudes of the public. After graduation, university students influence children, young people, patients, clients, deal with the media and represent authority in their professions. Their personal image becomes part of the societal notion of the level of health, education, science, legal system, economy and business. Individual personal example is essential, because it makes human qualities and shortcomings visible. Therefore, it is highly desirable that this pattern is highly positive, its bearer prefers a healthy lifestyle without socially pathological elements, i.e. without substance addiction or the so-called addictive behavior (Kachlík and Havelková in Řehulka et al., 2007; Kachlík and Havelková in Řehulka et al., 2008c).

Primary prevention of pathological addiction among children and adolescents is centered around family, primary and secondary schools. Young adults, including university students, are considered sufficiently personally mature to be able to effectively resist the offer of various substance abuse and addictive behavior, and thus avoid becoming victims of pathological addiction (Kachlík, 2005b; Kachlík, 2005c).

Since the mid-1990s, when a clear and effective drug policy concept was established in the Czech Republic, much attention has been given to epidemiological risk groups, especially children and adolescents. The focus is also on people in prison, socially disadvantaged, from disharmonious family environments, racially and ethnically different (Kachlík and Havelková in Řehulka et al., 2007; Kachlík and Havelková in Řehulka et al., 2008b; Kachlík and Havelková in Řehulka et al., 2008c). Society so far did not need to pay attention "problem-free" adults studying at universities, who from the perspective of drug epidemiology do not constitute a primarily vulnerable population group (Csémy et al., 2004).

There was no systematic monitoring of university students in the Czech Republic, but abroad, attention was paid in the form of a number of research studies. The issue of drugs has been expanded to include dependence on information and communications technologies and pathological gambling (Csémy et al., 2004; Vondráčková et al., 2009).

Since 1990s, some Slovak authors (e.g. Kolibáš and Novotný, 1998; Kolibáš et al., 2003; Novotný and Kolibáš, 1997; Novotný and Kolibáš, 2003; Novotný and Kolibáš, 2004) have warned of strong discrepancies between factual knowledge of undergraduates about narcotic drugs and psychotropic substances and their attitudes toward drug experiments (this concerned mainly cannabis, hallucinogens, ecstasy, anti-depressants), including the so-called legal substances (alcohol and tobacco).

Between 1993 and 1995, a pilot study was conducted at the Masaryk University which mapped the consumption of addictive substances and attitudes towards them (Kachlík and Šimůnek, 1995). Later (1997), a descriptive epidemiological study was implemented on a sample of nearly 1,600 respondents—students from six faculties (Kachlík and Šimůnek, 1998). The results correspond to the findings of our Slovak colleagues. In the Czech Republic, this population group has been paid less attention than children and adolescents, so it can be argued that the MU has played a pioneering role (Csémy et al., 2004; Kachlík and Havelková in Řehulka et al., 2008b). MU has become one of the universities that analyze the level of risk behavior of their students and that are interested in their adaptation to study and stay in an urban environment, in their leisure activities,

life at dormitories, and who provide advice and help in case of problems (Kachlík and Havelková in Řehulka et al., 2008c).

In 2005–2007, a three-year project entitled *"Description of the drug scene at MU and preventive measures draft"* was implemented. The first phase implemented a probe into the drug scene at two faculties (more than 200 respondents from of the Faculty of Medicine and the Faculty of Education) to validate the methodology (Kachlík and Havelková in Řehulka et al., 2007).

In the second stage, we used an anonymous questionnaire on the University information system website to study a sample of nearly 10,000 full-time students of all nine faculties. The frequency of abuse of the so-called "hard" drugs did not differ significantly from the Czech population of young adults. In the so-called "light" drugs (cannabis, hallucinogens and ecstasy), however, the situation was established to be unsatisfactory, indicative of frequent consumption among the respondents. Conciliatory attitudes to drug experiments and some substances (especially cannabis and hallucinogens) and their long-term use, the incidence of drug traffickers in universitys and underestimation of excessive and chronic alcohol drinking and tobacco smoking and their social hazard was considered very alarming (Kachlík and Havelková in Řehulka et al., 2008b).

The third and final phase was dedicated to mapping of prevention activities at the University. A similar form as in the previous stage was used to approach more than 2,200 students of all faculties, questions were focused on their experiences, opinions and attitudes towards prevention. The investigation showed that primary prevention of addictions at MU is, unlike at high schools, incoherent, formal, mostly poor and boring. Instead of merely passive passing of information, the students wanted to actively engage in debates and discussions, visit facilities for addicted clients (Kachlík and Havelková in Řehulka et al., 2008c).

In 2009, the *"Virtual drugs in a sample of students at Masaryk University"* project was implemented. The anonymous web-based questionnaire targeted at the use of information and communication technologies, or other potentially risky behaviors and leisure activities was completed by almost 2,500 full-time students from all nine faculties. The survey showed that very easy access to modern technology can be an aggravating factor for students when it comes to addictive behavior. A number of the respondents had conciliatory attitudes towards the potentially risky activities (Kachlík and Havelková in Linhartová et al., 2010).

"Dependency behavior of full-time Students at Masaryk University and Options in Prevention" presents an analysis and summary of the results of several research studies conducted on relatively large samples of full-time students at MU. It contains a brief introduction, the methodological basis related to individual parts of the research and presentation of unique results of 3 projects that comprehensively map the drug scene at MU (substance drugs, virtual drugs, prevention) using tables and commentary. The explicitly quoted discussion documents domestic and foreign research focused on addictive substances, addictive behavior and prevention, mainly among university students. The conclusion briefly summarizes the findings.

The paper brings a summary view of the drug scene at MU, and it is complemented by the experience and opinions of students regarding prevention. After completion of the various research stages, partial results were gradually published and discussed by researchers,

a substantial part of it in integrated form is published abroad for the first time. Outcomes of these studies are closely connected with meeting of the faculty research plan for 2005–2010 *"School and Health for the 21st Century",* ID No. MSM0021622421, head researcher prof. PhDr. Evžen Řehulka, PhD.

I

MAPPING OF THE SITUATION IN DRUG ABUSE AND ADDICTIVE BEHAVIOR

Zábranský (2003) states that studies describing the drug situation can be divided into two categories: descriptive studies and specific research.

Descriptive studies mostly use anonymous polling and focus on describing the use of addictive substances and behaviors, attitudes and opinions of the respondents to them. Typically, these are larger samples of persons interviewed (hundreds to thousands). An important part of descriptive studies is mapping of the situation in primary and secondary schools (Zábranský, 2003).

The second group—specific research—is used when it is necessary to find out detailed information on the types, quality, dilution, application paths of drugs, problems after taking a dose, the situation in illegal distribution (offer, prices), and on the options of services for drug users, their structure, accessibility, use, evaluation. Specific studies broadly address much smaller samples of people to whom the interviewers would otherwise normally have no access within descriptive studies, or their data would be "dissolved" in large samples and extracting them would be very difficult or practically impossible (Zábranský, 2003).

For the reader to get an idea of the consumption of drugs, the incidence of addictive behavior, problems associated with them and their possible prevention, the following text briefly discusses the results of major studies in different population groups in the Czech Republic and abroad. Most are representative samples of the respondents. Further information with relevant bibliographic references are available in the discussion.

1.1 Monitoring of substance drug use and the global incidence of addictive behavior

Kalina (in Kalina et al., 2003) points out that the drug problem in the current world has the character of a global epidemic. He distinguishes among three major periods: the first is until 1960s, when drugs were mostly viewed as an expert problem dealt with by a narrow group of qualified scientists. The second period covers years 1960–1990 when, mainly in developed countries, drugs have become a serious social problem, affecting various social layers. In the third periods, since 1990s, the extent of drug problems has clearly become global.

In the 1990s, substance abuse has become an issue in virtually all countries of the world, reaching unprecedented proportions of a global epidemic. Drug abuse is accompanied by a rise in crime, traffic accidents, deterioration of health quality of the population

according to the holistic concept, with a negative impact on the process of reproduction and development (Nožina, 1997; Kalina in Kalina et al., 2003; Holčík, 2009; Řehulka in Řehulka, 2010). UN estimates speak of 100 million people addicted to drugs (Nožina, 1997).

Williams et al. (2014) assess the extent and severity of the global pathological gambling issue. The prevalence of problematic gambling in 2011, depending on the area, ranged between 0.5% and 7.6% of the adult population. Problematic gambling is associated with a number of negative consequences for the individuals, their families, and for the society in general.

The recently published World Report on Drugs (UNODC, 2016; the report is published annually by UNODC—**U**nited **N**ations **O**ffice on **D**rugs and **C**rime) showed that 1 out of 20 adults, a quarter of a billion people aged 15–64, used an addictive substance at least once in 2014. This corresponds approximately to the combined population of France, Germany, Italy and the United Kingdom. The proportion of people who use drugs in relation to the size of the global population over the past four years does not seem to have risen dramatically. However, more than 29 million people who use drugs suffer from various related disorders, of which 12 million people inject the drugs and there are 14% of HIV positive people in this subgroup.

In 2014, 207,400 drug-related deaths were reported, equivalent to 43.5 deaths per million people aged 15–64. This figure remains relatively stable globally. Overdose deaths represent about a third to half of all drug-related deaths, most often caused by opioids, while the period shortly after releasing from prison is especially critical. Prisoners are vulnerable to high levels of drug use, particularly by injection, compared to the general population, they are vulnerable to infectious diseases including HIV, hepatitis and tuberculosis. Despite measures aimed at improving the health and reducing drug use among prisoners, there are considerable reserves in these areas. Injecting drug users suffer from considerably damaged health, high risk of intoxication and fatal overdose and they die prematurely. One in seven live with HIV, one in two with hepatitis C. Nearly a third of new HIV infections outside sub-Saharan Africa was found among injecting drug users. Notably, this relates to stimulants leading to risky sexual behavior, when the chances of HIV transmission is higher than for opiates (UNODC, 2016).

Cannabis remains the world's most commonly used drug. It is estimated that in 2014, cannabis was used by 183 million people, the second most used group is amphetamines. Opioid use by 33 million people is less frequent, but remains highly hazardous. We recorded a sharp increase in heroin use in some regions, particularly in North America, where it had followed a downward trend. The global trend in cannabis use has remained stable in the last 3 years, there has been an increase in North America and in Western and Central Europe. Cocaine use has increased after a period of stability, mainly due to its consumption in South America. Amphetamine use has appeared stable so far, but this claim may not be true, because relevant data are not available for some areas of East and Southeast Asia. Another complication for estimates of the number of drug consumers is the fact that many people belong to polymorphic users who use several substances simultaneously or sequentially (e.g. medication without a prescription and synthetic stimulants). The last decade has seen an increase in cases of treatment associated with cannabis use, in particular those who ask for help for the first time (half of all people treated for a disorder associated with cannabis use). There may be several explanations—changes in the criminal justice system, better treatment offer, the use of stronger types of cannabis in Europe and in the

United States. Treatment is demanded especially by young people—users of cannabis and amphetamines. Problems associated with opiates and cocaine are more often related to adults of a rather advanced age of about 30 years. Overall, men use cannabis, cocaine or amphetamines three times more often than women, while women more often than men abuse opioids and other depressant drugs without a prescription. Gender differences in drug use are rather the result of easier opportunities to use drugs socially than the biological vulnerability of male and female organism. Furthermore, while in most surveys, the prevalence of drug use among young people is higher than among adults, gender differences in drug use among them compared to adults are smaller (UNODC, 2016).

Cannabis remains the most widespread crop, its cultivation has been reported in 129 countries in 2009–2014, 49 countries reported opium poppy cultivation (mostly in Asia and the Americas), 7 countries reported coca cultivation (in North and South America). Cultivation of opium poppy in the past year decreased while coca cultivation increased. Cannabis remains the most trafficked drug in the world, there was a significant increase in seizures of synthetic drugs. Cannabis in various forms was seized in 95% of the countries surveyed in 2014 and accounted for more than a half of the 2.2 million seizures reported by the UN Office on Drugs and Crime, followed by stimulants, opioids and derivatives of coca. In all countries, more men than women came into contact with the criminal justice system for drug trafficking or possession for personal use (90% of the total). The absolute numbers of women imprisoned for crimes related to drugs have been growing, but the proportion of women arrested for drug offenses showed a decline in 1998–2014. There is a real risk that in a few years the supply of drugs over the Internet will increase, also through anonymous trading online marketplaces in the environment known as darknet (the dark side of the Internet, which is not for regular users). This raises concerns about the negative potential of "darknet" as it might reach a new population of users, providing easier access to drugs in both developed and developing countries (UNODC, 2016).

Opiates come primarily from Southeast Asia and Latin America, and less from southwest Asia. Global opium production in the year 2015 decreased compared to the previous year by 38% to 4,770 tons, i.e. at the level of the late 1990s. The decline was caused primarily by a decrease in opium yields in Afghanistan (48% compared to 2014), but illicit opium poppy cultivation represents a major agricultural activity there. According to UNODC estimates, the global number of users of opiates (opium, morphine, heroin) over the past few years has changed little, the adverse effects of opioids were felt by 17 million people in 2014. It is unlikely that the sharp decline in opium production in 2015 has led to a significant shortage of heroin on the global black market, because opium stocks accumulated in previous years. The worldwide illegal trade of opioids is relatively stable, heroin use in some countries even experiencing a renaissance after the previous decline, and it is related to a higher number of complications and deaths, especially in North America. In contrast, long-term trends in Western and Central Europe are stable or even declining since the late 1990s. Locally, in some European areas, heroin market may grow, increasing its availability and seizures of illicit shipments. Raw materials for the production of opioids are also grown in Africa. The total consumption of opioids in 1998–2014 remained almost unchanged, declining in Oceania. Global seizures of opioids compared to 1980–1997 doubled in 2009–2014, the largest amounts were seized in southwestern Asia, followed by Europe. Globally, Iran is most involved in seizures of opioids (75% of opium, 61% of

morphine, 17% of heroin). The so-called "Balkan route" supplying countries of Western and Central Europe with Afghan opioids passes through Iran, Turkey and southeast Europe. It still remains the most important channel for trafficking heroin. Increasing importance of the so-called "southern route" that runs through Pakistan and Iran, the Mediterranean Sea to the Persian Gulf region, to Africa (especially eastern), South and to a lesser extent, Southeast Asia, the Oceania and North America. After the downturn in 2008–2012, there was a revival of the so-called "northern route" leading from Afghanistan to neighboring countries in Central Asia, the Russian Federation and other CIS countries. Trade in the Golden Triangle is booming mainly due to the increase in opium production in Myanmar (formerly Burma) after the year 2006. Heroin trade in North and South America also continues to grow, as evidenced by seizures of heroin and morphine (an average of four tons in 1998–2008 and 7 tonnes in 2009–2014) related to the increase in opium production in Latin America (UNODC, 2016).

Although coca cultivation increased globally in 2014 by a tenth over the previous year, the actually cultivated area was the second lowest since the late 1980s. Although the global cocaine production is slightly higher than the previous year, it is still about 24–27% below the peak reached in 2007, i.e. at the 1990s levels. However, there are concerns that global cocaine production may rise further. Cocaine smuggling through Africa is gaining in significance, there are signs of growing cocaine exports to Asia, especially to the east and southeast, and to the Middle East, which is documented by seizures of cocaine in Asia, which has tripled from an average of 0.45 tons per annum in 1998–2008 to 1.5 tons per annum in 2009–2014. In Oceania, cocaine market has stabilized after a rapid growth in the past decade. Despite these regional variations, the annual prevalence of cocaine use at global level remained largely stable in 1998–2014, fluctuating from 0.3 to 0.4% of the population aged 15–64. With the growth of global population, the number of cocaine users grew from 14 million in 1998 to 18.8 million in 2014. The decline in consumption of cocaine per capita in 2007–2014 is mainly related to the decrease in cocaine production in the Andean region, in parallel with a reduction in the number of heavy cocaine users in North America. The situation points to an overall drop in the market for cocaine, although the number of users (occasional rather than regular) of cocaine in several rapidly economically developing regions continued to grow (UNODC, 2016).

Worldwide cannabis consumption has remained stable in recent years, despite changes in some regions. In 2014, 3.8% of the world population used it within the last year, this figure is from 1998 and has not changed much. In parallel with the growing global population the proportion of cannabis users is increasing. The main production and consumer areas are still Americas, followed by Europe. Approximately three-quarters of global seizures of cannabis plants in 2014 took place in America, the largest number in North America, while Africa accounted for 14% and Europe for 5%. Europe, North Africa and the Middle East remain major markets for cannabis resin (hashish), most of which is produced in Morocco and Afghanistan. Approximately 40% of all hashish seizures in 2014 was reported from the countries of Western and Central Europe. Some states in the United States have enacted the "recreational" use of cannabis, which was accompanied by a rise in consumption, health and transportation problems (emergency room visits, hospitalization, accidents and their consequences). In contrast, the number of arrests, people needing treatment and the number of criminal litigations has dropped (UNODC, 2016).

After three years of relative stability, seizures of amphetamine-type stimulants reached a new peak—more than 170 tonnes in 2014. Since 2009, global seizures of amphetamine per year ranged between 20 to 46 tons, while ecstasy seizures more than doubled (to 9 tons in 2014, 4–5 tons on average since 2009). Seizures of amphetamine clearly dominated over other stimulant drugs. While globally methamphetamine leads the black market in stimulants, its priority position is clearly evident especially in East and Southeast Asia and in North America. North America has permanently reported the largest annual amounts of methamphetamine seized, methamphetamine seizures in East and Southeast Asia nearly quadrupled in the years 2009–2014. In Oceania, methamphetamine seizures have grown rapidly since 2012. The growing number of users of crystal methamphetamine, increased frequency of use among certain social groups, increased purity of methamphetamine and a drop in prices may lead to negative health and social consequences. Large quantities of amphetamine tablets were seized in 2014–2015 in the Middle East. The commodity was meant for illegal sales in the region. More and more new psychoactive substances (several dozen per year) are documented by monitoring the black market and seizures. Most substances belonged to the group of synthetic cannabinoids and cathinones, synthetic opioids and sedatives were also found. 34 tonnes were seized globally in 2014, of which 32 tons were synthetic cannabinoids (26.5 tonnes in the US only). During 2013–2014, seizures of synthetic cathinones has tripled. The market for these substances is very dynamic in terms of quantity, regions and types of substances (UNODC, 2016).

The UN General Assembly adopted a document, which refers to the global problem of addictive substances and its effective solutions. The drug problem affects all areas of sustainable development of society, it has an impact on the individual, the community and the broad masses. When analyzing these bonds a number of objectives were set which are focused on community development, economic development, environmental sustainability, fair and inclusive approach and partnership. Drug addiction is a disease condition which often pushes the affected individuals to the margins of society, making their treatment and social integration more difficult. Inappropriate attitudes towards addicts (labeling) may also affect health professional and thus make it difficult to provide treatment to the needy (UNODC, 2016).

In the area of impact of drug use on health, it was found that in 2013 opioids, cocaine, amphetamines and cannabis globally shortened the life of users by 12 million years due to premature death or disability, of which opioid abuse accounted for more than 8 million years. The most risky impacts of drug use are caused by their injecting which is related to a substantial likelihood of overdose and infections, including blood borne viral diseases such as HIV and hepatitis C. Another major risk is the spread of venereal diseases from drug users into other segments of the population and the general population. It is also believed that the use of stimulants in particular changes the patterns of sexual behavior, which again increases the risk of transmission of venereal diseases, concerning mainly homosexual men. The objectives of sustainable development include strengthening of prevention and treatment of abuse of narcotic drugs and psychotropic substances. Drug policy based on scientific evidence may mitigate, by appropriate measures, the negative consequences of drug use. On the other hand—if the principles of international drug control are not properly aligned, the availability of controlled substances for the purposes of research and medicine may be seriously impaired. For three-quarters of the world's

population, drugs designed to treat moderate to severe pains (morphine, codeine, diazepam, phenobarbital) are not available or are very difficult to get hold of (UNODC, 2016).

Substance abuse undermines sustainable development perspective in gender equality and status of women in society. Regarding preferred drugs and vulnerabilities associated with them, considerable differences exist between men and women. Users of many types of addictive substances are predominantly men, and there is a real danger that health and social care for women may not be sufficient in this context. Women addicted to drugs and with HIV infections are more vulnerable than men. They display a higher rate of mental disorders, and they are also more likely to become victims of violence and abuse. Women also often carry the heavy burden of violence and deprivation associated with drug addiction of family members. Accused and convicted women and women in prison suffering from drug addiction face many serious complications, because the criminal system often fails to reflect their specific needs. Drug use often affects people in their most productive years. When young people get stuck in the trap of drug use or illegal trafficking, it reduces their educational opportunities and chances of finding a good job significantly, which very adversely affects the life of individuals and communities (UNODC, 2016).

Effects of the drug problem (cultivation, production, distribution, use) affect all countries, developed and developing. The relationship between economic development and drugs is particularly evident in the case of illicit cultivation of crops that serve as raw materials for the production of drugs. Poverty and lack of sustainable livelihoods in rural areas can motivate farmers to engage in illicit crop cultivation. Large-scale cultivation is facilitated by inadequate safety and disturbances in the functioning of government. Higher Socio-economic groups have a greater tendency to start using addictive substances, the lower suffer from a higher risk of drug addiction. The main impact of the problems associated with drug use are borne especially by people who are poor in relation to the society in which they live, which is clearly evident in rich developed countries. There is a strong link between social and economic disadvantages and problems associated with drug abuse, the consequences of social marginalization and exclusion, low level of education and unemployment. The geographical factor is also important. The proximity of drug production areas or major trafficking route for example explain the above-average rate of opiate use in the Middle East and Southwest Asia, including crack cocaine in South America and West Africa. Countries where there are high-income groups of the population tend to have higher annual prevalence of drug use across categories. Substances with a relatively high price and the associated higher profits for dealers can be more frequently found in countries with relatively higher levels of per capita income. In the case of substances such as cocaine and heroin, the level of economic development is related to the emergence of consumer markets, their size depends on the number of users and their total income. Various levels of socio-economic well-being of users in each country also has an impact on the type of drugs used. For example, in the United States, the relationship between drug use and unemployment is stronger for crack cocaine compared to other types. Drug markets are affected by ties between developed and developing countries, with some drugs, especially cocaine and synthetic substances, it depends how they get established in developed countries, with the following expansion into developing countries. A good example is the occurrence of ecstasy and hallucinogenic substances in North America and Europe, as well as steady growth in consumption of new psychoactive drugs in Europe,

Japan and North America. The relation between social development and the drug issue must be viewed dynamically.

Illicit cultivation of crops used to manufacture drugs is often found in wooded areas and it contributes to deforestation. In addition, illegal cultivation of crops threatens biodiversity of the original territory. It tends to occur near agricultural frontiers, which defines the space between intact forests and economically exploited areas. The fact that some lands have been privatized by drug lords, who built roads, airports and other infrastructure on them also contributes to deforestation (UNODC, 2016).

The legal and political objectives of the global war against drugs include reducing the incidence of violent crime, strengthening the role of the rule of law and fairness, combating organized crime, economic crime and illicit enrichment. Different stages of the drug problem can lead to various forms of violence. Drug use may be associated with violence caused by psychoactive effects of these drugs, violence may also be associated with criminal acts directed to procure the money to buy drugs. High-intensity of violence may be accompanied particularly by drug trafficking in Latin America. Increased vulnerability users to the effects of drugs, the characteristics of the illegal market, its structure, cohesion and hierarchy also play their roles. Generally, the drug trade flourishes where legal role of the state is weak and provides enough room for corruption. Income from illegal drug trafficking allow buying of protection from police and courts, politicians and the business sector are paid off. Profit is generated throughout the drug production chain, which is a key motivation for non-state armed groups, including terrorist organizations that can facilitate it or participate in it. In many countries, armed conflicts are thus complicated and prolonged. It is estimated that nearly half of the profits generated along the main routes of illicit heroin trafficking from Afghanistan to Europe comes from the four largest European consumer markets—France, Germany, Italy and Great Britain. The share of "black" drug economy in proportion to legal economy is higher in countries with low levels of economic development, often drug-producing countries. For example in Afghanistan, the total value of the "black" economy concerning opiates amounted to $2.8 billion in 2014, which corresponds to 13% of gross domestic product. Legalization of proceeds happens in many ways—from decentralized techniques such as the use of vouchers or transfers of funds, to sophisticated use of leading enterprises. These forms of illicit financial flows are essential for the continued existence of criminal groups and represent a great threat to the sustainable development of society (UNODC, 2016).

Preventive and repressive measures in drug control cannot be planned and applied effectively without international cooperation and shared responsibility. Aid of developed countries to the developing world, however, shows a contradictory trend. Although development aid is growing, since 2008, assistance to the sectors that can intervene in the illegal production and trafficking of drugs is falling. Efforts to eliminate the illicit cultivation of crops used to manufacture drugs may have an adverse impact on the source of income and employment opportunities for farmers and agricultural workers. Experience shows that these efforts are achieving positive results in the affected communities only if it includes measures to ensure alternative livelihoods, restore security and the rule of law. Examples of Colombia and Peru have shown that effective programs for alternative development may weaken the bonds between population and armed groups and drug trafficking. Military and police intervention aimed at restoring the rule of law may also affect the availability

of drugs to illicit markets, not only by reducing the supply through prohibitions, but also by combating human trafficking. Deployment of state power against the illicit drug trade which generates the highest profits can reduce the incidence of violence. On the other hand, intensive and rapid breaking of drug mafias can lead to escalation of violence. To reduce the negative impact of drug use on individuals and society it is necessary to ensure proper prevention, early intervention and treatment, aftercare, rehabilitation and social integration. The positive effect of these measures is reflected in a lower incidence of aggression and truancy, HIV infection and viral hepatitis. Reducing the demand for drugs is effective, but it must also be connected to other demonstrably functioning measures, such as programs for exchange of needles and syringes, substitution treatment of opioid dependence, antiviral therapy and social services (UNODC, 2016).

In the field of criminal justice and drug policy, we must proceed impartially, transparently and efficiently, with respect to human rights which promote the role of law and equal access to justice. If the military and police operations fail to respect these principles, it may lead to ruthless repression and violation of civil rights and liberties. Based on available data, more than three quarters of people were convicted and sent to prison for crimes related to drugs and drug trafficking, and less than a quarter for crimes related to possession of drugs for personal use. There are differences among countries in judicial powers as regards the definition of offenses, assessment of their severity, prosecution and severity of sanctions. Some countries use repressive approaches, such as prison sentences, for even minor drug offenses, e.g. for possession of small amounts of drugs for personal use. Other countries, by contrast, decided to soften their harsh repressive attitude, often using alternative sentences, or, in less serious cases without aggravating circumstances, the offender can escape with a fine, a warning, monitoring by a probation officer or mandatory counselling. Excessive use of imprisonment for minor drug offenses is ineffective in reducing recidivism and overloads the criminal justice system, which consequently lacks capacity to deal with serious crimes. When providing treatment, aftercare and social services as alternatives to imprisonment for offenders who use drugs, it has been shown to significantly increase their chances of social integration and reduce criminal recidivism. Many costs necessary to tackle drug problems can be financially quantified, ranging between 0.07 to 1.7% of gross domestic product. A number of countries had high costs of reducing the supply of and demand for drugs, preventive, curative and punitive measures. Some items, such as loss of life and reduced quality of life are often not even quantified, and if mentioned at all, then more indirectly, e.g. referring to the number of years of life lost or the number of years lived with disability (UNODC, 2016).

Development programs to support infrastructure and agriculture are a two-edged sword. Inappropriately applied, e.g. in the 1960s and 1970s in Andean region, they stimulated the dynamics of drug production. Quality program of economic development promotes alternative crops, sets up a system of subsidies and guaranteed purchase prices so that the farming communities are not impoverishment and do not lose motivation for positive change having abandoned drugs (coca, cannabis, poppy). The global expansion of trade and transport, apart from national economic development also brings a higher risk of the spread of drugs, reducing the effectiveness of state monitoring. Geographic occurrence of the use of certain substances, e.g. cocaine and synthetic drugs is currently less concentrated than in the past. While Europe, North America and Oceania are

increasingly influenced by the consumption of new psychoactive drugs, in other parts of the world experiencing turbulent economic boom some drugs are still virtually unknown. It is therefore very important to keep in mind the potential consequences of social and economic development on the drug use, the experience of developed countries can be a lesson in this sense (UNODC, 2016).

1.2 Monitoring of substance drug use and the incidence of addictive behavior in Europe

Monitoring and evaluation of various indicators of drug epidemiology in Europe is at a high level. In 1995, **E**uropean **M**onitoring **C**enter for **D**rugs and **D**rug **A**ddiction (EMCDDA) was founded, which conducts its regular data collection. The results show how individual EU member states implement and apply the principles of drug policy and how they contribute to the global debate on drugs (Hartnoll, 2005; EMCDDA [online], 2008).

Regular mapping of substance abuse among young people (sample aged 15–16) is a part of ESPAD (The **E**uropean **S**chool Survey **P**roject on **A**lcohol and Other **D**rugs). The survey deals with a wide range of addictive substances, including the so-called legal drugs (alcohol and tobacco) (NMSDDZ [online], 2003; Csémy et al. [online], 2006).

HBSC (The **H**ealth **B**ehavior in **S**chool-aged **C**hildren) is a more broadly focused study. It is built on the premise that behavior and lifestyle significantly affect health. Czech Republic participated in this research with 24 other mainly European countries in 1995 for the first time, the monitoring will be repeated every four years. A representative sample of children aged 11–15 years were approached, the survey covers five behavioral topics: addictive risks (alcohol and tobacco), dietary habits, physical and other leisure activities, psychosocial adaptation and mental health, injuries (Csémy et al. 2005; Madarasová Gecková et al., 2016).

Slovak, Czech and Hungarian schoolchildren admit repeated drunkenness more frequently compared to the average of the HBSC study, especially in the category of 15 year olds, schoolchildren from Ukraine and Poland are on the average level. The first experience with alcohol at the age of 13 years or less hovered at an average level of studies in all of the aforementioned states, with the exception of Hungary, where schoolchildren reported this experience more frequently. Regular alcohol consumption (at least weekly) reported by Slovak, Czech, Ukrainian and Polish schoolchildren is roughly comparable with the HBSC study average. Worse situation was observed in Hungary, especially for 15-year schoolchildren who consumed more alcohol. Slovak, Czech, Hungarian and Polish schoolchildren more common experience in the use of tobacco compared to the HBSC study average, especially among the 13 and 15 year olds. Ukrainian schoolchildren are approximately around the study average. Incidence of experience with marijuana use and its regular consumption (at least monthly) in the case of Ukrainian schoolchildren is significantly below the HBSC study average. Czech and Polish schoolchildren are above average in in marijuana use (Madarasová Gecková et al., 2016).

Europe dominates the world in alcohol consumption statistics. Alcohol is strongly rooted in the cultures of most European countries (Anderson and Baumberg, 2006; Anderson et al., 2016).

The current report of the European Monitoring Center for Drugs and Drug Addiction (EMCDDA) for the year 2014 provides an overview of the situation in member and candidate countries of the European Union and Turkey. It describes the European drug market, which remains stable, with some indicators even trending upwards (cannabis and stimulant drugs). Apart from established drugs, new substances are available, with the growing importance of medicines and addicts usually taking several drugs at once. Production of cannabis, synthetic drugs, some opioids and new psychoactive substances has moved to Europe, closer to consumer markets. Purity or potency of most illegal drugs is high or rising. Drug policy agenda in Europe must deal with larger and more complex set of political issues than ever before (EMCDDA, 2016).

Most data on prevalence attest to a modest increase in estimated use of commonly available drugs. Popularity of stimulants like ecstasy has been increasing, illegal manufacturers appeal to both existing and potential new consumers. It is necessary to pay greater attention to identifying local patterns of stimulant use, related harm and the responses to them. Cocaine is used more in western and southern European countries, in northern and eastern Europe amphetamines are at the forefront. Cocaine and amphetamines have been reported to have improved in purity in a medium-term, but prices have remained relatively stable. The growing number of new requests for treatment related to amphetamines are a major concern, with half the clients reporting intravenous administration. HIV spreads more easily among intravenous users of stimulants and people, especially gay men, show high-risk sexual behavior (EMCDDA, 2016).

Benefits and risks associated with the use of cannabis have been debated intensively. Levels of use are not generally decreasing, most of the countries surveyed report an increase. Cannabis has the largest share of the value of Europe's illicit drug market and it is the main source of income for organized crime. Health and social consequences associated with cannabis use are most pronounced in people who consume the drug more often or for a long time, roughly 1% of European adults are using cannabis daily or almost daily. In Europe, cannabis is usually smoked with tobacco, so it is important to ensure synergy between policies to control tobacco and cannabis. There are new psychoactive substances, particularly large amounts of synthetic cannabinoids, which are relatively easily available and more toxic than natural drugs (EMCDDA, 2016).

INCB report—**I**nternational **N**arcotics **C**ontrol **B**oard (INCB [online], 2010) mentions that cannabis can also come from Albania, Moldova and the countries of former Yugoslavia (Macedonia, Montenegro, Serbia). Hashish sold in Europe comes mostly from Morocco and Afghanistan and it is smuggled across the Iberian Peninsula and the Netherlands. Use of cannabis is particularly widespread among people frequently attending nightclubs, pubs and music events (Hoare, 2009; EMCDDA [online], 2010). Some users of cannabis show risky patterns of consumption, e.g. use of cannabis in large quantities and frequency, with a very high content of THC, inhalation from a water pipe ("bong") instead of a cigarette ("joint"). They admit more health problems including addiction (Swift et al., 1998; Chabrol et al., 2003).

Indicative estimates of selected drug use within the European Union show that cannabis in the segment of young adults (15–34) was used by 16.6 million people in the last year (13.3%), national estimates for the last year vary between 3.2 and 23.9%. In the case of the larger group of the adult population (15–64 years) it was used by 22.1 million people in the

last year (6.6%), and by 83.2 million (24.8%) persons in a lifetime. Cocaine in the segment of young adults (15–34) was used by 2.4 million (1.9%) persons in the last year, national estimates for the last year vary between 0.2 and 4.2%. In the case of the larger group of adult population (15–64 years) it was used by 3.6 million (1.1%) persons in the last year, and by 17.1 million (5.1%) persons in a lifetime. Ecstasy in the segment of young adults (15–34) was used by 2.1 million (1.7%) persons in the last year, national estimates vary between 0.3 and 5.5% in the last year. In the case of the larger group of adult population (15–64 years) it was used by 2.5 million (0.8%) persons in the last year, and by 13.0 million (3.9%) persons in a lifetime. Amphetamines in the segment of young adults (15–34) were used by 1.3 million (1.0%) persons in the last year, national estimates for the last year vary between 0.1 and 2.9%. In the case of the larger group of adult population (15–64 years) it was used by 1.6 million (0.5%) persons in the last year, and by 12.0 million (3.6%) persons in a lifetime. In the case of opioids, the study indicates 1.3 million high-risk users, with 82% of fatal drug overdoses blamed to this group of drugs. 40% of primary drug treatment requests were due to opioids, 644,000 of opioid users underwent substitution therapy in 2014. New psychoactive substances were used by 3% of young adults (15–24 years) in the last year, and by 8.0% in a lifetime (EMCDDA, 2016).

Numerous Nordic countries have long faced problems with opioids, an increase in deaths related to their consumption (including synthetic opioids) was recorded. Attention should be paid namely to younger users. Other concerns involve abuse of benzodiazepines and other drugs obtained from treatment providers or from unlicensed sources. A big hazard is the supply of medicines on the internet, social networks and the dark zone of the Internet, the so-called Darknet. When buying medicines online, the user has no guarantee of their authenticity, effects, quality, they are often counterfeit, illicitly manufactured in uncertified laboratories. Darknet is an area of Internet in whose markets you can illegally procure virtually any goods or services, including drugs. Purchase resembles a standard e-shop, but payments are anonymous and delivery may take place at a fictional address. On the other hand, the potential of the Internet can be positively used to prevent and combat illicit substances on local and global scale (EMCDDA, 2016).

ESPAD project is the largest pan-European international study focused on substance use among adolescents. Its aim is to provide an overview of the extent of use of legal and illegal drugs, compare it with the situation in other European countries and to monitor trends in the development of the situation in selected indicators of addictive behavior. In 2011, the fifth wave of ESPAD study data collection took place, spanning a total of 37 European countries, and the samples of the respondents are representative in terms of gender, region and type of attended school (Chomynová et al., 2014).

The results of the 2011 study showed that the extent of the experience of adolescents with cigarette smoking and the proportion of daily smokers remain at the same level in the long term. 25% of sixteen-year olds smoked daily in 2011, of which 8% were heavy smokers (11 or more cigarettes per day). Differences in the prevalence of daily smoking among the young boys and girls were minor.

Minor shifting of experience with tobacco and beginning of daily smoking to a higher age which occurred in 2007–2011 can be viewed as a positive (Csémy et al. [Online], 2008; Csémy et al., 2009; Chomynová et al., 2014).

The use of alcoholic beverages by teens is one of the serious long-term issues. Since 2007, incidence of regular beer and spirits drinking among boys and wines and spirits among girls has increased. Frequent heavy episodic drinking (i.e. five or more glasses of alcohol three times or more within the last 30 days) was admitted by 21% of students in 2011 (27% of boys and 16% of girls); the growth was apparent particularly among boys (Csémy et al. [online], 2008; Csémy et al., 2009; Chomynová et al., 2014).

Illegal drugs most frequently mentioned by respondents included experience with cannabis (42%), followed by hallucinogenic mushrooms (7%), LSD and other hallucinogens (5%) and ecstasy (3%). Experience with methamphetamine or amphetamines in a lifetime was admitted by 2% of the respondents, heroin or other opioids and cocaine by 1%. Among other addictive substances there is a high prevalence of inhalants (8%) and depressant drugs taken without a doctor's recommendation (10%). Significant gender differences were reflected in the case of cannabis, hallucinogenic mushrooms and anabolic steroids, which were admitted significantly more often by boys, use of sedatives and alcohol in combination with medicines were admitted significantly more often by girls (Chomynová et al., 2014).

In 2007–2011, the prevalence of use of the majority of controlled substances, including cannabis, decreased, while the trend was reversed for the first time since 1995. The rates of use of club drugs, methamphetamine, heroin and hallucinogens has been declining gradually since 2003. Situation in the use of inhalants and depressants remains relatively unchanged (Csémy et al. [online], 2006; Csémy et al., 2009; Chomynová et al., 2014).

Experience with the surveyed illicit drugs was most often gained by respondents aged 15 years. Since 2007, the first recorded experience with all surveyed controlled substances has shifted to a later age. Respondents were most often introduced to drugs through their older friends or in a group of friends. Nearly a third of adolescents used an illicit drug out of curiosity for the first time, other reasons included the desire to get into the mood, to forget about worries, and conformity (Csémy et al., 2009; Chomynová et al., 2014).

Compared to 2007, subjective perception of the risks associated with smoking and drinking has not changed, but there was an increase in subjectively perceived risks associated with illicit drugs. Occasional cigarette smoking was risk-free for almost 70% of the respondents, consuming 1–2 glasses of alcohol per day for almost half of the respondents, and one-time experiment with marijuana does not involve any risk for 46%. Regular use of addictive substances is generally considered a risk by more than 80% of the sample. Boys consider a one-off experiment and regular use of drugs to be less risky compared to girls. Subjectively perceived availability of cigarettes and alcohol remains relatively easy, despite the fact that these substances should not be sold to minors (under 18). Significantly perceived availability of anti-depressants has increased. Subjectively perceived availability of illicit drugs, including cannabis, compared to 2007 declined for the first time (Csémy et al., 2009; Chomynová et al., 2014).

Scope of primary school students' experience with drugs compared to high school students was significantly lower, which is also influenced by their age and greater parental control. Opinions and attitudes of students also change with age. They increasingly do not consider a single experiment with illegal drugs to be a risk, which may also be influenced by own experience with use, but on the other hand they are more aware of the risks associated with the regular use of drugs. The highest rate of experience with regular alcohol

and tobacco consumption, with illicit drug use and positive attitudes towards substance abuse was reported by students of vocational schools. Academic skills, probably also parents' education, family structure and social environment of the respondents play a role (Chomynová et al., 2014).

At European level, the situation in the field of illicit drug use stabilized in 2007–2011. In individual European countries there were diverging trends in substance abuse. Countries that have experienced a decline in most of the indicators included for example Bosnia and Herzegovina and Malta. Iceland, Norway, Finland and Ukraine recorded a decrease in items related to alcohol consumption. In Ireland and the UK, we can see a long-term decline in previous prevalence of cannabis and non-cannabis drugs. However, a significant growth was lately recorded in Cyprus (alcohol and illicit drugs), Greece and Hungary (alcohol) and Montenegro. Long-term growth rate of alcohol consumption is apparent in Croatia, Slovenia and the Slovak Republic, the highest increase in previous prevalence of cannabis in 1995–2011 was apparent in the Czech Republic, Estonia and the Slovak Republic (Hibell et al. [online], 2004; Csémy et al. [online], 2008; Csémy et al., 2009; Chomynová et al., 2014).

Polydrug use: patterns and trends (EMCDDA [online], 2009b) focused on polydrug use. It offers a summary of this way of use among school-aged children (aged 15–16 years), young adults (aged 15–34 years) and problem drug users. Among school-age children surveyed in 22 countries, 20% reported having used alcohol with cigarettes in the last month, 6% cannabis with alcohol and/or cigarettes, and 1% cannabis with alcohol and/or cigarettes and another drug (ecstasy, cocaine, amphetamines, LSD or heroin). Research shows that polydrug use among schoolchildren can increase the risk of toxic effects and chronic health problems in later years. Strategies that are targeted to the environment in which young people consume drugs and alcohol (e.g. law enforcement in the field of drug and alcohol, guidelines for safer environment in nightclubs) can protect health in situations related to nightlife.

For young adults, the simultaneous use of multiple drugs was an established pattern of drug use. It may be associated with higher risks. Frequent or heavy alcohol users were 2–6 times more likely to have used cannabis in the last year than the general population and 2–9 times more likely to have used cocaine during that period. Polydrug use occurs primarily among problem drug users and can aggravate pre-existing health problems, leading to higher levels of risk behavior and increased likelihood of serious consequences (e.g. fatal overdose). Toxicological findings in fatal overdoses (mostly caused by heroin) often show the presence of more than one substance, so that a substantial proportion of these deaths could be related to polydrug use. An analysis of data from 14 European countries showed that more than a half (57%) of those entering treatment reported at least one problem drug apart from the primary substance of abuse, due to which they sought help. Solving the problem of concurrent drug use is very difficult, specific programs are rare, substitution treatment for opiate dependence, and motivational therapy based on rewards provide positive results to some extent, for example. (EMCDDA [online], 2009a)

The dominant factor in Europe's problem with drug abuse is the concomitant use of alcohol, which is present in almost all cases of polydrug use (EMCDDA [online], 2009; EMCDDA [online], 2009b).

Binge drinking is often associated with occasional drug use and an increased risk of negative impacts among young people. A person who has problems with only one addictive substance is becoming the exception rather than the rule. (Hibell et al. [online], 2009)

Europe is increasingly confronted with the combined use of different psychoactive substances of legal and illegal kind. This creates a more complex set of needs that need to be met from the standpoint of medical and social aspects and that must be reflected in the political perspective of the European Union. (EMCDDA [online], 2009; EMCDDA [online], 2009b; EMCDDA, 2016).

In the Czech Republic, the Netherlands, Austria and the UK research into the environment of electronic dance music was carried out. It turned out that over 80% of the respondents used cannabis, which is much higher than the European average among young adults (Measham and Moore, 2009). Visitors to these events also had a high previous prevalence of cocaine use (17.6 to 86.0%). Inquiries among 646 visitors to an Amsterdam club in 2008 showed that 4.6% of them used cocaine during the evening of the survey, while in a survey among 323 clubbers in the United Kingdom, 22% admitted that they had used cocaine during the evening or planned to use it (Hoare, 2009; EMCDDA [online], 2010).

The study focused on problem gambling in Europe points out that gambling is a diverse concept that encompasses a variety of activities that are carried out in a variety of environments and that result in different patterns of behavior and perception on the part of participants and observers (Griffiths, 2013).

In terms of the gross proceeds of the games, the highest turnover was in the United Kingdom (11 billion euros), Germany (8.4 billion euros), France (7.6 billion euros), Italy (6.2 billion euros) and Spain (4.9 billion euros). The biggest players are the people of Ireland, Finland, Luxembourg, Great Britain and Sweden. Research shows that problem gambling can have a negative impact especially on health, employment, finance and human relations. In addition, gambling is linked to depression, alcoholism and obsessive-compulsive disorders (Griffiths, 2013).

Among adults in most European countries, lottery games are the most popular. Although in most states gambling is not allowed for minors, the more generally accessible it is, the easier it gets. Prevalence of problem gambling in Europe is in the range of 0.5–2%, several countries (e.g. Estonia, Finland and Switzerland) showed values in excess of 3%. In countries where there were large samples with good representativeness (e.g. the United Kingdom) prevalence of problem gambling among adolescents of at least four to five times higher than in adult population was observed. Problem players are often people who play on slot machines, namely in Estonia, Germany, the Netherlands, Norway, Sweden and Switzerland. Similar results were found in Great Britain, Iceland and Lithuania (Griffiths, 2013).

1.3 Monitoring of drug use in the Czech Republic

According to **N**ational **M**onitoring **C**enter for **D**rugs and **D**rug **A**ddictions (NMSDDZ), the Czech drug scene is similar to countries in the north and north-west Europe. As in England, Germany, Poland and Scandinavia, one of the major drug problems in our country is amphetamines and substances derived from them. In southern European (Slovenia,

Italy, Spain) and eastern European countries (Slovakia, Ukraine, Russia) the spectrum of abused substances contains more opiates, especially heroin. (NMSDDZ [online], 2005)

Results of recent research surveys indicate a stabilization of the drug scene in the Czech Republic. Prevalence of some addictive drugs compared the previous decade has declined, which could signal halting of further increase in drug abuse. The spectrum abused addictive substances is also changing (Mravčík et al. [online], 2008; Csémy et. al. [online], 2009; Nechanská et al., 2012).

According to the outputs of ESPAD (The **E**uropean **S**chool Survey **P**roject on **A**lcohol and Other **D**rugs) and the reports of the European Monitoring Center for Drugs and Drug Addiction (EMCDDA), the Czech Republic still greatly exceeds the European average in the use of some drugs, especially alcohol, tobacco, cannabis, amphetamine derivatives represented by methamphetamine and ecstasy (Hibell et al. [online], 2004; EMCDDA [online], 2008; EMCDDA [online], 2009c).

EMCDDA reports (EMCDDA [online], 2008; EMCDDA [online], 2009c) show that Czechs attack the peak prevalence of Cannabis use in the general population in Europe, 28% of those aged 15–24 have used cannabis in the last year (the European average is 17%). Prevalence of previous cannabis use in the same age group reached 44%, while the European average is 31%. Czech Republic also leads in the Ecstasy use in the general population, in the last year it was used by almost 8% of Czechs in the age group 15–34 years, which is four times more than the European average. The level of previous Ecstasy use in the same population segment reached 15%, the EU average was below 6%.

The Czech Republic is in the European "elite" also in methamphetamine use. According to estimates, the Czech Republic had approximately 25,000 methamphetamine users aged 15–64 in 2008. (EMCDDA [online], 2008; Mravčík et al. [online], 2010)

The investigation mapping the use of alcohol and tobacco in the Czech Republic, which was conducted by the National Health Institute, showed that there were 31.4% of smokers in the adult population in 2014, of whom three quarters accounted for smokers smoking at least one cigarette a day. A higher number of male smokers compared with women is statistically significant. Most men smoke 15 to 24 cigarettes a day (33.1%), most women smoke 5–9 cigarettes per day (32.4%) with the largest proportion of the 15–24 age group (Sovinová et al. [online], 2014; Sovinová and Csémy [online], 2015).

Nearly one third of students aged 13–15 years smoke cigarettes, girls more often than boys. The fact that the proportion of smokers who admit that they are likely to start smoking next year is high is alarming. There are significantly more thus minded girls (32% of nonsmokers) than boys (22% of nonsmokers). During the last decade, the prevalence of cigarette smoking has declined slightly more in boys than in girls. However, the number of children receiving tobacco products other than cigarettes has increased (Sovinová et al. [online], 2014).

Alcohol is consumed regularly and frequently by 13% of the adult Czech population (drinking every day or every other day). There are only 3% of permanent abstainers, 10% reported abstinence in the last year, especially because of their health condition. Average annual per capita consumption is 7.2 liters of pure alcohol or 8.3 liters if we omit abstainers. Frequent binge drinking, i.e. every week or more frequently, is admitted by 17% of the respondents (25% of males, 9% of females), 15% of adults can be considered high-risk drinkers and 4.9% are problem drinkers (Sovinová and Csémy [online], 2015).

Beer was drunk regularly (weekly or more often) by 38% of fifteen-year boys and 20% of girls, spirits by 13% of boys and 10% of girls. Repeated drunkenness was admitted by 46% of fifteen-year boys and 40% of girls. Use of alcoholic beverages among teens had a slightly increasing trend in the last ten years. Incidence of regular drinking of beer and spirits increased in boys, wines and spirits in girls. Frequent heavy drinking (five or more glasses of alcohol three times or more in the last month) was reported by 21% of students (27% of boys and 16% of girls) in 2011 (Sovinová et al. [online], 2014).

Drinking alcoholic beverages has a strong relationship to smoking tobacco—there is an accumulation of health risks. Low social status is associated both with higher rates of abstinence due to history of health and social problems and with a higher incidence of harmful and problem drinking. In the group with high socio-economic status there are more moderate drinkers and fewer high-risk and problem drinkers (Sovinová and Csémy [online], 2015).

According to a study monitoring the use of tobacco in the Czech Republic (Sovinová and Csémy [online], 2016) there were 24.1% of smokers in 2015, more than three-quarters were daily smokers. Compared to 2014 (31.3%) there was a significant decrease in smoking, especially in men. Czech population smokes primarily cigarettes, the share of other tobacco products is negligible. Most men smoke 15 to 24 cigarettes a day (35.5%), most women smoke 5–9 cigarettes per day (32.6%) (Sovinová et al. [online], 2012; Sovinová and Csémy [online] 2016). Compared to 2014, the number of cigarettes smoked per day among smokers in the youngest age groups has decreased. Almost seven out of ten smokers aged 15–24 reported they smoked fewer than 10 cigarettes a day. Compared with 2014 there was no decline in the number of non-smokers exposed to environmental tobacco smoke (14.4% vs. 14.8%) (Sovinová and Csémy [online], 2016).

ESPAD study focuses on a sample of 16-year olds. From the results of the monitoring implemented in 2011 it is estimated that in the age group 15–19 in the Czech Republic, about 234,000 people had at least one experience with illegal drugs (especially cannabis), while about 100,000 persons had a recurrent experience (6 or more times in life) (Chomynová et al., 2014).

The regional analysis showed that there are statistically significant differences in the Czech Republic, both in the use of legal drugs (tobacco and alcohol), illicit drug use and subjectively perceived availability of drugs. In terms of smoking, the more exposed regions included Prague, Ústí nad Labem, Karlovy Vary and South Bohemia, in terms of alcohol consumption, it was Prague, Central Bohemia, Zlín region and Vysočina region. Regarding the experience with monitored illegal drugs, the more exposed regions included Prague, Ústí nad Labem, Karlovy Vary, Olomouc and Moravian-Silesian region, the less exposed regions are Central Bohemia, Plzeň, Hradec Králové and Pardubice (Chomynová et al., 2014).

Evaluation of trends in the regions in 2007–2011 showed that the situation in the Czech Republic is relatively dynamic—while at the national level, the situation in certain indicators is stable in the long-term, different regions show significant changes and fluctuations. Even in cases where there was a downward national trend in illicit drug, there were regions with a different development in comparison with other regions and therefore the situation in the regions must be monitored closely (Csémy et al. [online], 2008; Csémy et al., 2009; Chomynová et al., 2014).

Comparison with the European average of the ESPAD study showed that students in the Czech Republic compared to their peers from other European countries smoked cigarettes and drank alcohol more, including in excessive doses. The most significant difference was observed in the case of previous cannabis use, which was admitted by 42% of Czech respondents in 2011, compared with 17% of the respondents from across Europe. The remaining indicators (previous use of non-cannabis drugs, the use of sedatives without prescription or use of inhalants in life) no significant difference was observed between the Czech Republic and the European average (Csémy et al. [online], 2008; Csémy et al., 2009; Chomynová et al., 2014).

According to recent Annual Report on Drug Situation in the Czech Republic, the situation in the field of licit and illicit drugs remained relatively stable. The most commonly used illicit substances are cannabis drugs that were previously used by approx. a quarter of the adult population, and about a tenth of adults in the last year. Previous experience with ecstasy was reported by approx. 6%, hallucinogenic mushrooms by 4% and methamphetamine by 3% of the population, use of other illicit drugs is below 1%. Experience with ecstasy in the previous year was reported by 1.5% of adults, experience with other drugs are minimal (Mravčík et al., 2015). Depressant drugs or medications containing opioids without a prescription or against the advice of doctors were used by 18.3% of adults it in the last 12 months (Nechanská et al., 2012; Mravčík et al., 2015). Experience with new drugs (synthetic or vegetable) was reported by 1.3% of the respondents. A total of 2.0% of the respondents (3.2% of males and 0.7% of females) admitted previous experience with anabolic steroids. Use of illicit substances is higher among males and young adults aged 15–34. There was a shift of current and lifelong use of cannabis to older age (the highest rate is in the age group 25–29), a rise in prevalence rate of cannabis in the age group 15–19 was also recorded (Mravčík et al., 2015).

In the segment of adolescents, substance abuse is widespread. In 2014, 22% of people aged 14–15 admitted to smoking tobacco in the last month, 12% smoked daily, especially girls, boys, however, were stronger smokers. Five or more glasses of alcohol on one occasion three or more times in the last month were drunk by 10% of boys and 6.5% of girls. Experience with cannabis among 11–15-year olds was at 9–11%, among 14–15-year old elementary school students it was 26–33%, and among 16-year old secondary school students it was 42–47%. The increase in risk behavior occurs most often between 12 and 13 years of age. Regular smoking (at least once a week or more), and regular drinking (at least weekly) was admitted by 2% of 11-year olds in 2014, 5% of 13-year olds and 16% of 15-year olds. Drunkenness during the last month was admitted by nearly 20% of 15 year-olds. Previous experience with cannabis use was reported by 24% of 9th grade students (boys and girls), 9% in the last month. In comparison with the year 2010, there was a decrease in the incidence of regular smoking, regular alcohol consumption and use of cannabis (Mravčík et al., 2011; Mravčík et al., 2015).

The incidence of smoking and risk alcohol consumption in the Czech adult population is stable. 31.4% of population older than 15 years currently smoke (37.4% of males and 25.8% of females), 23.5% are daily smokers (28.2% of males and 19.0% of females), representing over 2 million people. Smokers—men smoked mostly 15 to 20 cigarettes a day, most women smoked 5–9 cigarettes a day. A total of 23% of the respondents mentioned exposure to tobacco smoke at home, 22% are exposed to smoke at the workplace.

12.5% of the respondents drink alcohol daily or almost daily (18.9% of males and 6.4% of females). Approximately 6.0% of the population older than 15 years (7.4% of males and 4.7% of females) fall into the category of harmful drinking (consuming 40–60 g of alcohol for men and 20–40 for women), another 7.2% fall in the category of hazardous drinkers (more than 60 g of alcohol for men and more than 40 g for women), i.e. 540,000 or 640,000 adults in absolute numbers. Amphetamines consumed in the Czech Republic are almost exclusively limited to methamphetamine. Opioids consumed in the Czech Republic by problem users include primarily heroin and buprenorphine. Most frequently abused forms of opioid analgesics are patches and tablets. The most recent phenomenon is the emergence of new synthetic drugs—cathinones or phenethylamines, but their use is still quite limited. The new synthetic drugs are mainly complementary substances for problem users (Mravčík et al., 2015).

Estimated number of problem drug and opioid users has increased again in 2014, across all types of drugs and injecting drug users (mean estimate of the number of problem users of opioids and methamphetamine is 47,700 persons, i.e. 0.67% of the population aged 15–64, of which 36,400 are methamphetamine users and 11,300 are opioid users). The number of injecting drug users reached 45,600. Above-average prevalence is apparent in Prague and Ústecký, Karlovarský, Liberecký, Olomoucký and Jihočeský regions. There was a massive increase in Prague, Ústecký, Jihočeský, Liberecký and Vysočina regions in the last 10 years. Furthermore, it is estimated that approximately 180,000 people are problem cannabis users (of which 23 thousand are below 18 years of age) and 270,000 are problematic alcohol users (of which approximately 11,000 are below 18 years of age). The social context of drug use include low education, unemployment, indebtedness, problems with family and loved ones, housing, etc. The incidence of social exclusion is bound to areas with a higher proportion of Roma than in the general population in the Czech Republic. The most widespread substance abuse in these communities involves alcohol and tobacco, as well as methamphetamine, cannabis and inhalants, opioids locally, pathological gambling is also widespread. Production and sale of drugs (cannabis, methamphetamine) are also common. There is a mutual relationship between homelessness and substance abuse, and also between substance abuse and providing of commercial sexual services (Mravčík et al., 2015).

A population study of substance use and attitudes towards them was carried out on a representative sample of 4,500 respondents in the Czech Republic in 2008. Its results showed that 82% of the population aged 15–64 have previously smoked cigarettes. 47% of the respondents smoked in the last month, every other of them daily, i.e. more than a quarter of the population. Most smokers were young adults, where almost 59% have smoked in the last month, the strongest smokers were the respondents aged 35–44 (29% daily). Non-smokers were significantly more numerous among women (63%) compared to men (43%), women also smoked less intensively every day (one fifth) than men (one third) (Běláčková et al., 2012).

Less than a tenth of the respondents aged 15–64 abstained from alcohol in the last year, 5% drank only once. In contrast, a third of the population drank alcohol twice a week and more often. Regular drinkers (consuming twice a week and more often) were most frequent in the age group 45–54. There were more alcohol drinkers among women than among men (13% vs. 6%), and in regular consumption (twice a week and more often)

there were also significant differences (8% of females vs. 26% of males). 42% of males versus 17% of females drank six or more glasses of alcohol during a drinking episode at least once a week in the last year. Alcohol was drunk several times a month by almost half of young people aged 15 to 17 years in the last year, which was actually an illegal activity. At least one experience with alcohol was acquired by 84% of adolescents in the last year, only 16% of them did not drink at all in that period (Běláčková et al., 2012).

Depressant medication was taken by more than a third of the sample in the past year. Compared with tobacco and alcohol, prevalence of depressant drugs was higher among women, it was used by 29% of females vs. 17% of males in the last month. It was most frequent in the age group of 55–64 years in which these drugs were used by 42% of females and 30% of males in the last month (Běláčková et al., 2012; Nechanská et al., 2012).

Some type of illicit addictive substance was tried by nearly 37% of the Czech Republic population aged 15–64. In the last year, these substances have been tried by 17% of the sample, and less than a tenth during in the last month. It was mostly cannabis, which was previously used by more than one third of the sample, 15% in the last year and almost a tenth in the last month. Cannabis is the most widely used illicit drug in the Czech Republic (Běláčková et al., 2012).

17% of the respondents had some previous experience with non-cannabis drugs, 7% had used them in the last year and 3% in the last month. The highest levels of prevalence indicators were reached by 15–24 age group, namely for previous prevalence of illicit drug use (62%), cannabis use (59%) and drugs other than cannabis (32%), prevalence of illicit drug use in the last year and month were similarly high. With increasing age, the rate of illicit drug use in the last month and year decreased in all monitored substances significantly, with the exception of previous prevalence of methamphetamine and heroin (the highest in the 25–34 age group). Men reached higher prevalence values of illicit drug use indicators than women. The most frequently used non-cannabis addictive substance was ecstasy, followed by hallucinogenic mushrooms, LSD, methamphetamine, cocaine and heroin. Prevalence of drug use was higher in 15–34 age group, in men, in the unemployed, in singles and for individuals with elementary or secondary vocational education (Běláčková et al., 2012).

The attitudes of the respondents indicated that trying heroin once or twice in a lifetime was the least tolerated action. On the other hand, drinking one or two alcoholic drinks a day or smoking ten or more cigarettes a day were relatively well accepted, compared with other phenomena. According to the respondents, smoking one or more packs of cigarettes per day means higher risk than trying marijuana once or twice in a lifetime, which was considered the activity with the lowest degree of risk. A fifth of the respondents rated acquiring cannabis as very easy, one half as relatively easy. More than a half of the sample has been offered cannabis before. The gap between the availability and prevalence increased with the social danger of the drug (Běláčková et al., 2012).

Between 2004 and 2008, prevalence of illicit drug use in all categories increased in the Czech Republic, most strikingly of LSD, methamphetamine and hallucinogenic mushrooms, increase in the use of ecstasy and cannabis was more moderate. In terms of international comparisons, observed prevalence of drug use surpassed the European average particularly in LSD, ecstasy, methamphetamine and cannabis. However, cocaine use was below the European average. The highest values in the European context were

achieved in some LSD, cannabis, ecstasy and methamphetamine indicators (EMCDDA [online] 2008; Běláčková et al., 2012).

Between 2000 and 2003, two questionnaire surveys on drug use among fans of electronic dance music took place in the Czech Republic. There was an increase in previous prevalence of experience and acceptability of nitrates, ecstasy, alcohol and methamphetamine. The most commonly used drugs were alcohol and cannabis, the level of acceptability increased significantly with powder cocaine and solvents. Tobacco, methamphetamine and alcohol were considered the most risky for physical health. Consumption of methamphetamine, alcohol and cannabis evoked fears of mood changes and problems in interpersonal relationships. In connection with the consumption of cannabis, alcohol and ecstasy respondents mentioned fear of memory problems, difficulties in school and at work. The responders admitted some risks associated with drug abuse, however, there was a contradiction between their knowledge and low subjective evaluation of concerns of potential health and social consequences. Most of the monitored sample decide to experiment with ecstasy and other synthetic drug for the first time between 17th and 19th year of age. Serious problems arise when driving under the influence of drugs, which was admitted by 47% of the respondents, 79% sat as a passenger in a car driven by an intoxicated person, 6% had and accident under the influence of drugs. Fans of electronic dance music who participated in the questionnaire survey indicated a relatively close contact with intravenous drug users. The drug was applied in this manner only by 3.4% of the respondents in the last year, however, more than a half of the sample know people who use drugs in the way and they were an eyewitness of intravenous application (Kubů et al., 2006).

According to recent reports on gambling in the Czech Republic (Mravčík et al., 2014; Mravčík et al., 2016) the highest market share of gambling has long been occupied by electronic gaming devices, especially video lottery terminals, which saw a sharp increase in 2008–2012. In 2012, money spent on games of chance in the Czech Republic totaled CZK 135.5 billion, CZK 103.7 billion was paid, revenue from the game (the sum total of money lost) amounted to CZK 31.8 billion. Availability of games of chance is high in the ČR, which is also true in Europe and possibly worldwide. Currently, the massively expanding segment of the gambling market is online gambling.

Approximately 60% of the Czech adult population aged 15–64 have had an experience with playing a game of chance, 25–40% in the last year and approx. 15% in the last month. The most widespread games of chance are number and instant lotteries (previous prevalence of 50%, 15–30% of the adult population having encountered in the last year), followed by experience with the game on electronic gaming devices (16–18% of the general population). In actual experience in the last year, fixed-odds betting is second after the lotteries, followed by electronic gaming devices. In the past 30 days, experience of gambling (apart from lotteries and small betting) is reported by 4–6% of the adult population (5–8% of young adults aged 15–34). Every adult Czech person spends an average of approximately CZK 1,500 per year on betting. Players of games of chances who have played over the last year have bet approx. CZK 6,000 per year on average. Men gamble more than women (their prevalence of gambling /without lotteries and small bets/ in the last year was 3–5 times higher than women), with the exception of number and instant lotteries, where the rate of participation of both genders was comparable in the last year. The rate of playing number and instant lotteries is higher in the age groups above 35 years

(approximately 20% last year), but the actual experience of playing on electronic devices or online is the highest in the 15–24 age group (10 to 11% and 5–15% in the last year). There are only limited data on gambling of children and adolescents in the Czech Republic, revealing that 9.6% of sixteen year olds played on electronic devices in 2011. 3.1% of this population group (once a month and more) can be considered regular players. Despite the long-term downward trend, the prevalence of gambling among adolescents is high, although for them it is not legal and should be practically inaccessible. There is an obvious link between gambling in adolescence, smoking, use of alcohol and illicit drugs (Mravčík et al., 2014; Mravčík et al., 2016).

Higher risk involved particularly in live games and games for electronic devices is chiefly due to their structural characteristics and environmental factors. They encourage engagement in the game, being absorbed by the game, fast and frequent repetition of bets, binge playing, exceeding the original intended maximum bets, etc. The percentage of persons at risk in connection with gambling reaches 4.5–5.0% of the general population aged 15–64, i.e. 325 to 364 thousand people. Problem players (players at higher risk of facing problems) make up 1.7–2.3% of the adult Czech population aged 15–64 (approximately 123 to 170 thousand), of which 0.6–1% of the population is at high risk of developing pathological gambling (approx. 40 to 80 thousand), wherein half of them are aged 15–34. Pathological players are male dominated (about 85–90%). A typical problem pathological player in the Czech Republic is a single or divorced man around 35 years of age with secondary education, slightly above average financially. The average age of treated gamblers in recent years has increased (Mravčík et al., 2014; Mravčík et al., 2016).

In some population groups, there is a higher risk of problem gambling. Particularly with respect to employees with free or irregular working hours, with less supervision and easier access to money (people working in the gambling industry, hospitality, professional athletes). Offer of gambling is statistically significantly related to the economic status of regions regarding unemployment, low income and depopulation. At the municipal level, correlation was observed between gambling in casinos and higher incidence of public nuisance, drunkenness and playing by people receiving social benefits. Problem players show worse mental health than the general population, a higher incidence of substance abuse and disorders associated with it. This concerns the use of legal substances (alcohol, tobacco, energy drinks, medicines), but also illegal drugs, particularly cannabis and methamphetamine. Problem players suffer from disruption of family relationships and family breakdown, problems at work, alternating and losing jobs, and indebtedness (Mravčík et al., 2014; Mravčík et al., 2016).

1.4 Monitoring of drug use in the population segment of university students

In the field of drug epidemiology there are a number of descriptive and comparative studies that deal with the use of licit and illicit drugs and other forms of addictive behavior in the most vulnerable population groups—e.g. primary and secondary schoolchildren from problematic socio-cultural environment, people from ethnic minorities, injecting drug users, and addicts in prison. University students are among adults who are presumed

to have a certain level of knowledge and attitudes that can warn against possible hazards and should promote healthy lifestyle without drugs. Therefore, this segment of population (18–35 years) is not a "classic" risk group and it was not paid systematic attention. (Kachlík and Havelková in Řehulka et al., 2007).

Greater interest to the group of university students was first devoted abroad. Here are brief examples of some research surveys, more and broader ones are available to the reader in the discussion.

A representative study was carried out in the US on the use of marijuana in the sample of more than 17,500 students (Bell et al., 1997). Almost a quarter of them said they consumed marijuana during the last year preceding the interview. Webb et al. (1996) mapped the use of drugs in a sample of more than 3,000 undergraduate students. Nearly two-thirds of men and half of women drank alcohol regularly, a fifth of the sample used cannabis at least once a week, a third admitted experience with other illicit substances, especially hallucinogens (LSD) and club drugs (ecstasy).

In the Slovak Republic, the results of systematic monitoring of selected groups of university students have been emerging since the second half of the 1990s. In particular, we should mention the work of Novotný and Kolibáš (1997 and later), describing the situation at Comenius University in Bratislava. Their 2003 results pointed to one tenth of regular smokers and drinkers of alcohol among the respondents, 20% of females and 40% of males had experience with cannabis. Compared to the previous monitoring the number of consumers of tobacco has increased significantly, while the number of regular and occasional drinkers has not changed significantly. Frequency of experience with cannabis has increased significantly.

Pavúk and Koščo (1997) monitored smoking habits and the prevalence of smokers among students of the Faculty of Education in Prešov in 1982–1995, addressing more than 1,900 respondents. About a third of the students smoked in 1982, four out of ten men and a quarter of women. In 1991 there was an increase in the frequency of smokers in the population with the significant participation of incoming freshman students and women in general. In 1995, there were fewer smokers compared to 1991, but more compared to 1982, although without statistical significance.

In 1993 the Czech Republic implemented the first probes and attempts at mapping the drug scene (drug use and attitudes towards them) at Masaryk University (Kachlík and Šimůnek, 1995).

Initial data for systematic monitoring was obtained through an anonymous questionnaire, which interviewed 1567 students at 6 faculties in 1997 (Kachlík, 2005b; Kachlík, 2005c). The research showed that 75% of the respondents drank alcohol at least once a week, 30% smoked tobacco at least once a week. Of banned substances, cannabis was consumed the most frequently, followed by hallucinogens, club drugs, methamphetamine, cocaine and opioids. In 80% of cases it consisted of 1–2 attempts, 3–5 attempts less frequently, rarely more. The first drug experience was mostly out of curiosity, the desire for pleasant feelings, the need for mental relaxation and conviviality. The respondents showed a strong contradiction between knowledge, risk perception and subsequent behavior.

In 2005–2007, Kachlík and Havelková implemented a three-year project entitled *"Description of the drug scene at MU and a proposal of preventive measures*." In its first phase, a pilot study was carried out among students of Medical faculty and the Faculty of

Education. This was followed by a second phase during which data were gathered from nearly 10,000 students of all faculties (Kachlík and Havelková, 2007). From the results, it was evident that almost 40% of the respondents had smoked tobacco during the last week before the survey, 99% drank alcohol before (women rather occasionally, men regularly). Most frequently used illegal substances involved marijuana (in the last month it was consumed by 16% of the respondents, more than ten times ever by 45% of the respondents). The other frequently mentioned substances were hallucinogenic mushrooms (previous experience by 15% of the respondents) and club drugs (previous experience by 9% of the respondents) (Kachlík and Havelková in Řehulka et al., 2007).

In Prague, Csémy et al. (2004; 2005) conducted a study approaching a sample of 904 students of five universitys. Excessive alcohol consumption was admitted by a fifth of men and almost a tenth of women, regular (daily) cigarette smoking was reported by a seventh men and women, use of any of the illegal substances (marijuana, methamphetamine, heroin, LSD, ecstasy) was admitted by a quarter of men and more than one-tenth of women. Almost a third of the surveyed university students used addictive substances in physically or socially hazardous manner.

Csémy et al. (2004; 2005) also noted that university students used addictive substances, some of them to the extent that is not negligible and exceeds the normal population.

Kachlík and Klech (in Řehulka, 2010) published the results of mapping the drug scene at the University of Ljubljana (ULJ, Slovenia, the probe sample consisted of 262 respondents) and its comparison with the situation at Masaryk University in Brno (MU, descriptive study, a sample of 9,993 respondents). Allegations that opioids (mainly heroin) are more affordable for ULJ students than for MU students were verified. Furthermore, it was possible to conclude that the use of cannabis by MU students during the last six months prior to the survey was not significantly greater than the use of cannabis by ULJ students. Higher prevalence of methamphetamine among MU students in all reporting periods compared to ULJ students was not recorded. There was no evidence that ULJ students took less ecstasy than MU students did during the last six months prior to the survey.

The results showed that there were statistically significant differences ($p < 0.05$ or better) in the range of substance abuse between the students of both universities. Compared with MU students, ULJ students clearly dominate in all studied time periods in the of use hashish and hashish oil. ULJ students also exceed MU students in the extent of use of stimulants (cocaine, stimulating amines) except for methamphetamine. Another difference was found in the range of use of volatile substances whose use is again more widespread among ULJ students. Conversely, hallucinogenic mushrooms and other hallucinogens were used more by MU students. In the overall view of the drug scene at both universities, we can conclude that almost all students have drunk alcohol before. The most popular illegal drugs used by the students at both universities are cannabis drugs, from which marijuana was the most commonly used, by nearly two thirds of the respondents from both universities at least once in their life, and by approx. one-third of the respondents from both universities in the last six months.

The results of the surveys that were conducted at both universities clearly showed that substance abuse is currently present in the university population to the extent that is not negligible. In many cases, a higher prevalence of substance abuse was found among university students than in the general population or among young people. If we realize that

many university students work with young people, patients and represent authority for the public in their professions after graduation, then these findings are particularly alarming. This paper has become one of the first attempts to compare the extent of drug use among university students in two different states of the European Union in the Czech environment. For this reason, it is recommended to perform further studies of the same nature regularly at European level, as is the case e.g. with the ESPAD study mentioned above.

1.5 Preventing risky behavior with attributes of addiction

Inappropriate and excessive consumption of legal drugs, abuse of banned substances, dependence on them, their illicit production and handling are activities that threaten the fundamental values of individuals, families, communities and civil society. Drug problems affect many areas of life and therefore they must be addressed proactively, comprehensively and in a coordinated manner, broadly focused prevention plays an important role (Heller and Pecinovská, 1996).

Generally, drug prevention can be characterized as initiatives, activities and strategies designed to avoid negative consequences associated with legal and illegal drug use and other types of addictive behavior. It involves health damage and legal, social and other consequences for drug users and people around them. The objective of these efforts may be preventing the first use of drugs or other addictive behavior, prevention of drug abuse and dependence and reduction of inconvenience for people around the user, or the measures may be aimed at preventing conflicts, including conflicts with the law (Gallo et al., 2002; Richter et al., 2005).

Nešpor and Csémy ([online], 2003) do not perceive prevention as a mere gratuitous provision of information on addictive substances, but they note that its goal should be to prevent abuse of these products by minors or at least a shifting encounters with drugs to a later age. Heller and Pecinovská (1996) add that prevention can be regarded as activities that lead to enhancing and protecting of health, education towards a healthy lifestyle. Apart from providing relevant information, other objectives of prevention also involve restricting availability of addictive substances.

According Kalina et al. (2001), prevention can be divided into three stages: primary, secondary and tertiary. In short—primary prevention is aimed at measures that can be made in advance so that the population can face the risk. Secondary prevention is aimed at detecting population groups and individuals at risk, solving their problems, while tertiary prevention should prevent complications. The boundaries between these stages are not always clear, especially between secondary and tertiary prevention. Kvapilík (1985) mentions that the classification of prevention can be carried out according to various criteria, e.g. according to negative phenomena that we wish to prevent, according to the strategy that will be used and according to the group we wish to affect.

Kvapilík (1985), Nešpor and Csémy (1996) mention classification of prevention according to focus on specific and nonspecific prevention. Non-specific prevention is not explicitly aimed at clearly defined risks, its aim is preserving the general rules of healthy lifestyle. It is typically applied in the family, continues through transition of the child to preschool facilities and starting of school attendance and various interest groups

(leisure activities). Preventive activities should be easy, simple and should be performed automatically in appropriate situations (i.e. washing hands after toilet and before eating, morning hygiene, looking around before crossing the street, opening windows, caution when meeting with strangers). Specific prevention can be applied only when the child is able to absorb factual knowledge about risks and measures for their prevention, typically at the beginning of second grade at elementary school. Specific prevention is aimed at certain types of risk, and how to deal with them (traffic accidents, addiction, bullying, prostitution, racism, crime, abuse, neglect and child abuse, infectious diseases, widespread non-infectious diseases, etc.).

In practice, we can also encounter a somewhat different classification of prevention. Universal prevention addresses entire populations, especially at school and community levels. Its main task is to prevent or delay the onset of substance abuse, the occurrence of any other addictive behavior and the problems associated with them by providing the entire population or population segment with skills to protect themselves against inception and development of addictive behavior. For example, a properly considered and conceived combined program for children and parents can be very effective. Conversely, little evidence exists in the case of major campaigns presented in the media, there was even an adverse inciting effect of such prevention when the intervention, paradoxically, gave rise to a wave of interest in addictive substances and activities previously sparsely occurring in the population. Universal school-based prevention is being implemented in Europe with varying degrees of coverage and with different contents, its important features include provision of information and life skills training. Structured prevention programs are relatively rare. The member states of the European Union seek to standardize and coordinate their drug policies and prevention, to wider deployment and support for school programs (Nešpor et al., 1998; EU Council, 2005a, EU Council, 2005b).

Selective prevention works on specific groups, families or communities, where due to the lack of social ties and means there realistically exists an increased likelihood of potentially risky behavior and addiction to substance and non-substance drugs. Evidence of the effectiveness of selective prevention are more difficult to obtain from the standpoint of experimental evaluation. Effective selective prevention in the environment of vulnerable families results in reduction in risks to children, reported cases of antisocial behavior, problems with the welfare, juvenile delinquency, domestic violence, problems in mental and physical health and substance abuse. European countries mostly provide selective prevention in a limited scope, most interventions are targeted at young offenders, vulnerable families and ethnic groups. The European Union seeks to provide greater regional coverage with the selective type of prevention (Nešpor et al., 1998; EU Council 2005a, EU Council, 2005b).

Indicated prevention aims to identify individuals with behavioral issues or psychological issues that may be indicative of the development of pathological addictions later in life, and to target them individually with special interventions. In Europe, the programs of indicated prevention are mostly carefully evaluated, often showing high efficiency. Overall, however, interventions this area remain limited. These are mainly projects for children with attention and behavior disorders, early intervention and counselling for people who started taking drugs, peer programs implemented in schools educating young people with behavioral issues (Nešpor et al., 1998; EU Council, 2005a; EU Council, 2005b).

One of the most difficult tasks in drug policy consists in making sure the different levels of prevention correspond to the degree of vulnerability of the target groups, that interventions are evidence-based and sufficient in coverage. Prevention strategies focused on environments strive to change the immediate cultural, social, physical and economic environments in which people make their choices about drug use. Typically they include e.g. smoking bans, alcohol pricing or promotion of healthy lifestyles in schools. Environmental prevention measures at societal level and targeting the social climate in schools and communities are effective in altering normative beliefs, and consequently the risk of developing a dependency. Nearly all European countries have implemented partial or complete ban on smoking, tobacco advertising was banned by EU in 2003, there is a debate on the proposals of minimum prices and restrictions on alcohol advertising (EU Council, 2005a; EU Council, 2005b).

Prevention should always be proportional to the age and knowledge of the target population group. Priority for small children under 3 years of age is appropriate and comprehensive meeting of their needs. General resistance against addiction is being reinforced. At preschool age (approximately between 3 to 6 years) the child should be repeatedly told that health is a value that must be nurtured, protected and promoted. The child gradually realizes the risks that are tied to real life and the world, learns to avoid and deal with them. Between 7 and 12 years of age, it is advisable to prefer concrete information and skills instead of abstract concepts, continue learning and strengthening the habits associated with a healthy lifestyle, promote holistic model of health as a fundamental value in life. In this age, specific prevention aimed at refusing tobacco, alcohol, drugs and other addictive behaviors increases in importance. The period after 12 years of age (early adolescence) places great demands on the young person, family and school. Negativity, frequent discussions and questioning of authority, increased propensity for risk-taking, rejection of recommendations, finding own possibilities and limits come into forefront, adolescents are confronted with peers who strongly influence them. Teenage children belong to significant risk groups in terms of drug epidemiology and appropriate prevention is very important for them (Nešpor and Csémy, 2003).

Ondrejkovič et al. (1999) describe school as a promising environment for health. There is virtually no place in the world where one is protected from drugs, efforts to create drug-free areas on Earth have failed. Still, there can be small "islands of health" in schools, with people who do not have their own drug experiences yet and whose opinions are still clean—with our children.

School drug prevention does include ethical, legal and medical aspects, however, it is limited only to the specific school environment. It includes both prevention of drug abuse and other types of addictive behavior, as well as rules and regulations regarding substance abuse and addictive behavior, passing of at risk students to the care of professional health services and policies regarding drug use in schools. School prevention should focus on all legal and illegal drugs (substance and virtual) that can lead to addiction or dependence (Gallo et al., 2002; Richter et al., 2005).

Skácelová (in Kalina et al., 2003b) notes that school environment creates an entirely new character for prevention. The school and its planned approach and influence on the student may ensure that prevention programs will be included in the activities and the students will participate in them.

In all European Union member states, schools are considered the most important setting for universal prevention. For this reason, emphasis on prevention in schools in national strategies and in the structured implementation of this approach has significantly increased, which is reflected in the expansion of school drug policy, development of specific modular drug prevention programs and the associated improving of the quality of teacher education (EU Council, 2005a; EU Council 2005b; SRVKPP, 2011). Schools and families are partners in the prevention of problems with drugs and other addictive behaviors (Nešpor and Csémy, 2003).

In preparation and implementation of school-based prevention projects its investigators need to determine long-term visions (especially in terms of positive changes in attitudes and behavior of the target population groups towards healthy lifestyles without dependence), they should have sober expectations regarding achieving of changes in student behavior in relation to drugs (longer time before noticeable positive changes are achieved, regional aspects, continuity, patience, potential complications). It must take a critical approach (in case of trouble look for faults in own ranks first, implement the project in a smaller group of people as a pilot study first, benefit from the incentives that the project participants will receive through feedback). Quality project assumes support of the entire community, especially students and their families, teachers and non-teaching school staff who are understandably communicated its message and participate in it as circumstances allow. The researchers should handle the provided financial resources efficiently and economically. Properly prepared project respects the type and location of schools (modification according to the type of residence, school size, structure of students). Timely and accurate decisions are firmly related to the operation and credibility of the project, it is necessary to timely and properly solve problems, adhere to the timetable and monitor the use of resources. Management of smaller projects can be handled by the research team directly, larger projects require help of coordinators and other experts. In the implementation of prevention we welcome experience from abroad, but we always adopt it critically and with reserves—it is always necessary to reflect the characteristics of the target population groups and communities and correctly fit them into the socio-economic framework of the region, to be aware of problematic issues and conflicts that a good program would not exacerbate, but weaken. Investigators should consider the impact of changes caused by the preventive project on the community and try to make them consistent with recognized social, ethical and scientific standards. No matter how good the project is, it cannot cover all risks and it has its limits of intervention. It is therefore necessary to take into account that the behavior and attitudes of interest groups of the population and entire communities can change more slowly and to a lesser extent than originally expected. Time adequacy and limited scope of the preventive project are related to the fact that the attitudes and behavior of the target population groups cannot be changed immediately, but require a certaon time. Usually, the first positive signals can be captured in a few months, in 2–3 years they should already be apparent, but their growth and fixation take several years. Support for the project participants is tied, among others, with its time constraints (Galla et al., 2002; Richter et al., 2005).

Effectiveness of prevention will generally increase if target groups are respected, focusing on groups divided by age (children, youth, adults), by professional groups, by

risk groups (apprentices, students, professionals, unemployed, etc.) (Nešpor, 2000; Kachlík and Šmajsová-Buchtová, 2002).

Family, whose strengthening is currently of paramount importance to maintain our entire culture, remains at the core of any preventive action. Family may seek to ensure that children do not succumb to risky behavior with attributes of addiction. Functional drug prevention begins in childhood, by developing a sense of self-esteem, self-confidence, facilitating of positive human and ethical values in the course of their education, such as compassion, ability to work, the joy of learning, social responsibility and tolerance. Young people will gradually become solid human personalities, able to build lasting relationships and to find the correct approach to constructive solutions if there are life problems (Ondrejkovič 1999; Nešpor, 2000).

Every leisure activity for children and youth cannot be automatically considered prevention, it is necessary to select and promote programs and concepts that will perform regenerating, relaxing, educational, social preventive and compensation functions. Leisure time means time when the child can freely, based on its mood and interest, choose an activity it prefers (Pávková et al., 2001).

Inclusion of the child in leisure activities is a relatively complex process that needs to include information, motivation, economic and social factors. A number of sporting and cultural activities are commercialized, children often spend their free time passively—at the computer, the Internet, watching television, listening to recorded music. If children lack a clear idea of the meaningful use of time, they are at a risk of succumbing to boredom (Viehoffová and Reuysová, 2000). Education to personality development of children is an important aspect, as well as acquiring positive social behavior, healthy lifestyles and the natural rejection of all forms of violations of the law. Sports and movement are the healthiest leisure activities, contributing to healthy lifestyle in many areas such as socialization and wholesome personality of young people. Positively filled leisure time reduces the probability of occurrence of adverse events related to social pathologies and it also increases the chance that the child will be successful at something. In leisure time activities, composition and quality are more important than mere amount (Hajek et al., 2008).

Nešpor and Csémy (1996) and Skácelová in Kalina et al. (2003a) deal with drug prevention strategies and their effectiveness. They note that some are very suitable for children and teenagers, while others fail. Emotional appeals and intimidation are generally considered inappropriate and may be partly successful only in socially sensitive individuals not yet addicted to drugs. In other cases there occurs a communication block and alienation. Even simple information itself does not seem appropriate as a preventive strategy, but it can be helpful combined with feedback activation of listeners and discussions. It is, however, necessary to avoid the undesired inciting effect. Offer of better alternatives than drugs, selection of leisure activities of reasonable interest to help develop human knowledge and skills, resistance to social pathologies, including dependencies are generally appropriate. Society-based prevention (community prevention) is a very good strategy that strives for cooperation between different levels of society and promotes the values of healthy lifestyle. Also, peer programs are a good opportunity to influence not only children and adolescents, but also adults, the principle being the presentation of "clean", i.e. drug-free lifestyle as a value and norm, carried out by trained peers of approximately the same age as their target population group. Reducing the availability of drugs is a good option under

certain conditions, it is necessary to connect it with the system of effective prevention, build on repressive measures against manufacturers and sellers of drugs. Prevention system in a developed country must include treatment and limitation of complications, even these measures are extremely expensive and their outcome depends, among other things, upon motivation and cooperation of the patient (user care).

Before choosing an appropriate prevention strategy we need to carefully analyze the situation and focus on risk factors, which include e.g. drug use in the family, dysfunctional family, long-term unemployment, broken relationships, frequent conflicts, domestic violence, inappropriate parenting style (too hard or liberal), absence of duties and penalties or their excessive use, overloading the child, inappropriate spending of leisure time, tendency to use violence, truancy, lying, escaping. When implementing prevention we can advantageously use protective factors, e.g. working families with harmonious relations and climate, preferences of a drug-free lifestyle as the norm, democratic type of education (reasonable obligations, rewards and punishments), entertaining and enriching ways of spending leisure time, good relationships with peers who do not use drugs, influence of school or work (Nešpor and Provazníková, 1999; Nováková in Kalina et al., 2003a; Skácelová in Kalina et al., 2003a; Skácelová in Kalina et al., 2003b; McGrath et al., 2007).

Many of these features can be psychiatric and neurological symptoms associated with organic disorder of the central nervous system, so it requires careful examination of the patient and exclusion of these symptoms (Nešpor, 2000).

The most effective strategies in prevention programs include community prevention. It consists in appropriate approaching, motivating and involving the widest possible spectrum of individuals and organizations in the community (e.g. village, town, region), from which the population group that the program will affect comes (EU Council, 2005b; Flaks and Trapková in Kalina et al., 2003).

Experience of different communities suggests that at the beginning of a series of preventive initiatives there usually is an inconvenience that occurred in the area (e.g. drug problems among students, poisoning or death of a teenage due to drunk driving in a car accident, or complaints from parents). At the beginning of successful programs there is often one person or a group of people who are willing to put in the effort or time for a good cause, using the project to improve their self-confidence and provide service to society. The chances of success increase if we succeed in involving as many approached members of the target population group as possible to participate in the preparation and implementation of the program. The program course is facilitated by regular meetings of the staff involved and continuing preparation of followers. Smaller events during weekdays and extraordinary events are integrated—such as tours, exhibitions, festivals, weekend or holiday camps. Acceptance of the program by its participants is apparent from, among other things, feedback (questionnaires, surveys, interviews), which also helps expand and improve the program (Flaks and Trapková in Kalina et al., 2003; Nováková in Kalina et al., 2003b).

The main objectives of prevention in the community include mobilizing the potential and capability of the community to develop specific programs for people in situations of risk, or at risk of drug addiction, promote healthy lifestyle of the community and create appropriate conditions for it, provide objective information about drugs and keep people informed about the activities focused on prevention in that area, promote and build good

cooperation between various institutions, but also among individuals in the community with an emphasis on creating suitable conditions for solving the drug problem and a functioning system that allows easy communication and cooperation between institutions and organizations at various levels (Galla et al., 2002; Flaks and Trapková in Kalina et al., 2003; Richter et al., 2005).

Typically, prevention is implemented in the community in five steps. The first is the mapping of needs when inventory of existing activities in both specific and non-specific primary prevention is taken, the level of awareness of the drug issues, degree of awareness of the seriousness of the drug problem and its spread in the community, as well as urgency and willingness to tackle this problem in the context of primary prevention are determined. The second step is the creation of a network referred to as networking, in which organizations that are directly involved in primary prevention programs in the community are contacted and interconnected, even though their program may no deal with issues concerned directly, and local politicians and political formations, important personalities, institutions and organizations in the territory are addressed. The third step involves planning, i.e. collection of information, creation of databases (directory) of individuals and organizations, their focus and contribution to the project. It is also necessary to formulate relevant problems and objectives, possible solutions and resources, to acquaint representatives of local government and residents of the community with the results of the mapping of needs and with the project proper. Then come pilot projects in selected target groups, ongoing evaluation, monitoring of effectiveness and goals, researchers respond to stimuli arising from feedback, they modify and refine the project and propose expanding the program to the entire community according to their needs. The fourth step involves the actual implementation, i.e. implementation and coordination of the various activities of the preventive project. The prevention funding must be sufficiently transparent and well controllable, effectiveness of individual activities measurable, the sub-programs must be targeted. Community awareness and dissemination of the project can be aided by appropriate media presentation. The project team can start a new project or build upon already running ones, which, however, must comply with the initial focus (nonspecific or specific prevention). The project is carefully evaluated on an ongoing basis, its effectiveness and the objectives are monitored, and the project is gradually expanded to the entire community. The fifth and final step is the evaluation performed by the implementation team in which all involved or interested from the target group can participate. The benefits of the project for the whole community are evaluated, its presentation in the media, the project goals must be clearly defined and understood early on so that the results are clearly measurable and verifiable. It is necessary and useful in the context of a larger project to have the so-called independent evaluator i.e. an evaluator unconnected with the project implementers and with the affected community (Gallo et al., 2002; Flaks and Trapková in Kalina et al., 2003; Richter et al., 2005; McGrath et al., 2007).

The basic features of an effective program of community prevention is knowledge of the environment (demographic, cultural and socio-economic aspects, the most common types of addictions, problems of ethnic groups, resources and opportunities at the local level), creation of a local area network (personalities, institutions and organizations, approaching of several generations, combination of "festive events" and "everyday activities"), stimulation of civic morality (moral values, active participation of local residents in case

of problems), a clear message, the use of effective factors, both of specific and non-specific prevention, and the absence of overt or hidden cues that reinforce prejudices against drug users that hinder introduction and development of prevention, treatment and social services (Flaks and Trapková in Kalina et al., 2003; Nováková in Kalina et al., 2003b; Council of the EU, 2005b).

In 2003, WHO member states unanimously adopted the Framework Convention on Tobacco Control (FCTC), which came into force in February 2005 and was joined by the Czech Republic. FCTC is the first treaty in the world in the field of public health regarding tobacco control. It represents a coordinated and effective action plan, sets out effective tobacco control strategies in public policies (advertising ban, raised taxes and prices of tobacco products, enforcement of smoke-free public places and workplaces, warnings on tobacco packaging, research, monitoring and exchange of information relating to tobacco). In the Czech Republic, FCTC was fully implemented in 2012 after its ratification by the President. WHO supported the FCTC by a technical document, MPOWER, a package of six compelling tobacco control measures, which provably lead to a reduction in consumption and save lives: **M** (Monitor—tobacco use and prevention policies), **P** (Protect—people from tobacco smoke) **O** (offer—help to quit smoking), **W** (warn—of the dangers of tobacco use), **E** (enforce—a ban on tobacco advertising, promotion and sponsorship), **R** (raise—the tobacco tax) (Sovinová et al. [online], 2014).

The system of preventive activities for children and youth at the national level in the Czech Republic is coordinated by the Ministry of Education, Youth and Sports, at the regional level there are regional school prevention coordinators and at the municipal level there are prevention methodologists from pedagogical-psychological counselling centers. The key document is the National Strategy for Primary Prevention of Risk Behavior for the current 2013–2018 period. The key tool for coordination of primary prevention at the regional level are the regional prevention plans. In 2014, the process of certification programs of universal, selective and indicated prevention, provided by the National Institute of Education, continued. In 2014, the government reviewed the Health 2020 document—the National Strategy for the Protection and Promotion of Health and Prevention of Diseases, for which the Ministry of Health adopted 13 action plans of this strategy, among them also the Action Plan for reducing health risk behavior, which also includes the Action Plan to Reduce Harm Caused by Alcohol in the Czech Republic for the period 2015–2018 and the Action Plan for Tobacco Control in the Czech Republic for the period 2015–2018. The approved National Strategy builds on the "Long-term program of improving the health status of the population of the Czech Republic—Health 21" and it is based on the approved "Concept of sanitation services and primary prevention in public health protection." The main goal of the National Strategy is to improve population health and reduce the incidence of disease and premature deaths that can be prevented. The aim is to prepare conceptual materials for the development of the public health system and to stabilize disease prevention and health protection and support for launching of effective and sustainable mechanisms to improve the health condition of the population in the country. To achieve common goals, Health 2020 primarily uses tools and processes of protection and promotion of public health and disease prevention targeted at people who are key partners in the process of public health development. National Health 2020 strategy is meant not only for public institutions, but also for all other involved—individuals, communities,

non-profit and private sectors, educational, scientific and other institutions. Its task is to contribute to solving of complex health problems of the 21st century related to economic, social and demographic trends, notably through disease prevention and health promotion. The activities are in line with developments and commitments at the international level, both within the European Union and the European region of the WHO (SRVKPP, 2011; Sovinová et al. [online], 2014; Mravčík et al., 2015).

The Government submitted to the Parliament a draft law on protection of health from the harmful effects of drugs. At present, prevention and awareness campaigns are aimed mainly at preventing and reducing smoking, prevention of driving under the influence of drugs and prevention of alcohol drinking by minors. Activities focused on illegal drugs and their consequences are also becoming more intensive, while no preventive or information campaign was recorded in the field of pathological gambling (Mravčík et al., 2015).

Although the Czech Republic has been trying to tackle gambling for a lob time, fragmented legislation, a lot of pressure by lobby groups that operate gambling and earn on it, as well as lack of effective enforcement of compliance with mandatory rules are major obstacles. Regulation of gambling in the Czech Republic is subject to frequent changes and upheavals, it creates political tension, is the subject of claims and expectations from professional and lay public and civic initiatives and a focus of media interest. Municipalities play a major role in regulation of gambling. The communities that adopted regulation there was an improvement in the area of public nuisance, gambling of children, adolescents and people receiving social benefits, leisure time activities, appearance of public space, culture and sports, tourism and municipal infrastructure. The use of proven and effective prevention tools preventing problem gambling in the Czech Republic is still incomplete and unsystematic (Mravčík et al., 2014; Mravčík et al., 2016).

Regarding prevention of gambling, the Czech Republic could be served by examples of good practice that have long been used successfully in Anglo-Saxon countries. According to Williams, et al. (2014), spontaneous approach to preventing gambling needs to be systematized, a set of effective tools and an integrated strategy that will rely on scientific evidence of its effectiveness needs to be developed. It is necessary to create an optimal design and evaluation of new initiatives in whose preparation, implementation and evaluation Social Studies will be involved. As a guideline when developing new activities, it is advisable to use models of behavior change, with behavior change serving as the primary measure of efficacy. Regular evaluation of problem gambling in the population helps to monitor the impact of new initiatives. Effective gambling prevention requires reduction in revenues, which will affect non-problem players as well. Profit generation priority must not prevail over the objective of minimizing the risks of gambling. It is possible to utilize and coordinate a wide range of educational and policy instruments, their relative importance is comparable. It is preferable to involve the local community in the implementation of these activities. Another important measure is to reduce general availability of gambling—limit or reduce the number of establishments and forms among vulnerable population groups. We can also limit the speed of the devices and the maximum amount of bets and wins, frequency of tight losses, number of bet lines and seats at the machines. Other effective measures involve introduction of gaming limits on gambling and (or) playing time for electronic gaming devices and gambling on the Internet and abolishing of bonus cards for "loyal" players. It is necessary to thoroughly check the eligibility to gamble (age limit,

people affected by property seizures, receiving social benefits), reduce use of alcohol and tobacco during games and the players' access to money. Generally it pays to offer players the knowledge, attitudes and skills to prevent progression of problem gambling, to raise awareness of the population about gambling and problem gambling, correct misperceptions and superstitions associated with gambling, promote proper attitudes to gambling and skills leading to change of behavior. Positive population changes come slowly so it is necessary to maintain those measures in force in the long term.

For today, use of modern information and communication technologies (ICT) is typical. In the previous text we mentioned risks that may be associated with their overuse or incorrect use, but they their application may have a positive use in preventive work. The role of the Internet as a key medium in terms of providing information in the field of public health has been growing. Besides sites providing essential information on health issues there arose numerous web-based clinical applications that offer interactive intervention and treatment programs (dealing with psychological and motivational problems, treatment of panic disorders and depression, quitting smoking and problem alcohol use). In terms of the provision of treatment of disorders caused by substance use, Internet programs have a great potential, since they can reach a significant number of people from the target groups. Demand for the treatment of disorders caused by substance use within the European Union has been rising steadily, especially among young cannabis users and socially integrated users, since this population segment is often reluctant to use the services of "conventional" treatment centers aimed mainly at injecting drug users. The German project entitled Quit the Shit (QTS) stated that 32% of the participants who completed the course allegedly abstained and the data also revealed that it was completed by almost 60% of clients on average. Despite the limitations, it appears that Internet programs may prove a useful way of mediating contact with a group of drug users, whose demand for assistance often misses the traditional services. Applications allow inexpensive sharing of access among countries and linguistic environments owing to Internet (EMCDDA, 2012).

Another way to use the Internet is the proposal to enable presentation and organization of drug prevention activities at the University through the existing MU Information System and align its content with the information system of drug prevention activities in Brno (Kachlík, 2005a).

The planned information system has public and private sections, linking individual participants via Internet and from connections within the subjects (intranet). Its framework is used to communicate by academic institutions (universities, research centers), education sector (management, projects, studies, needs of schools, Minimum preventive programs for prevention of social pathologies, leisure activities), health sector (theoretical institutions, sanitation and epidemiology institutions, in the enhanced version also clinical fields—projects, studies, prevention, treatment, social rehabilitation), other government organizations (projects, employment policy, incentives, legislation, control at the regional and municipal level), libraries, reading rooms (literary fund in digital and traditional form providing and exchanging information, links to other resources), state and municipal law enforcement (projects, preventive and repressive measures, regulations, leisure activities), media services (collecting and sorting of information from the media, press releases, statements), the judiciary, prisons (valid legislation, facilities with drug-free zones, alternative punishments, probation and mediation services, integration after serving time), leisure

centers (leisure activities, projects, proposals), non-governmental and non-profit organizations, civic associations (supply, service, support of community activities, including prevention) and others (a certain part of the system remains open and publicly accessible to all interested parties from the "outside"). A substantial portion of the system is already built and operated, the focus of its use, however, is the information to the professional public or private data in a closed cyberspace. The university information system could integrate important and available resources and thus offer them to all interested students and teachers. Additionally, it is possible to establish a section dedicated to the prevention of social pathology at the MU, including anonymous counselling services, exchanging knowledge and experience with other universities in the Czech Republic (Kachlík, 2005a).

II

METHODOLOGICAL FOUNDATIONS

The main research problem consisted in mapping and analysis of addictive behavior in the sample of full-time students of Masaryk University, namely establishing student experience with addictive substances and other types of addictive behavior throughout their lives, in the last six months, last month and week prior to the survey, the age and circumstances of first use, frequency and motivation to use, availability of psychoactive substances and incentives for addictive behavior. We also observed the views of students regarding preventive activities at the University, their offer and quality. There were 3 studies carried out in the framework of the research project at the Faculty of Education in 2005–2010 *"School and Health for the 21st Century",* id. MSM0021622421, head researcher prof. PhDr. Evžen Řehulka, PhD.

The research focused on three areas:

- experiences and attitudes of the sample of MU students to abused substances;
- experiences and attitudes of the sample of MU students to other types of addictive behavior, including the so-called virtual drugs;
- experiences and attitudes of the sample of MU students to activities and quality of drug prevention at the Masaryk University.

Abbreviations used for the Masaryk University faculties

ECO Faculty of Economics and Administration
ART Faculty of Arts
INF Faculty of Computer science
MED Faculty of Medicine
EDU Faculty of education
LAW Faculty of Law
SCI Faculty of Science
SOC Faculty of Social Studies
SPO Faculty of Sports Studies

2.1 Addictive substances

At first (since 1992), MU has implemented short questionnaire probes into the university environment, focused mainly on future doctors and teachers, later (1997) contacting students of 6 faculties (Kachlík and Šimůnek, 1995; Kachlík and Šimůnek, 1998).

In 2005, a pilot probe was carried out on the sample of students of two faculties (education and medicine) of the Masaryk University, total of 222 people, including 43 males

and 179 females. Respondents were selected randomly in collaboration with administrators at individual faculties. Information was obtained from anonymous questionnaires. The probe was used to test the applicability of the questionnaire draft and to schedule extensive interviews (Kachlík and Havelková in Řehulka et al., 2007).

For now, the latest description of the drug scene at MU focused on addictive substances was held in 2006. Its main goals were building on similar research from 1997, approaching students from all nine faculties, updating anonymous questionnaires to map the experiences and attitudes of the respondents towards addictive substances, and analyzing differences in individual characters when sorting files by gender and faculty. It was a quantitatively oriented research using an anonymous questionnaire which was based on ESPAD 2003 standardized questionnaire.

Hibell et al. ([online], 2004) and Šťastná ([online], 2010) inform that the ESPAD questionnaire distributed within the **E**uropean **S**chool Survey **P**roject on **A**lcohol and Other **D**rugs determines attitudes and experiences of 16-year and 18-year old student with tobacco, alcohol and illicit substances. It observed prevalence of previous experience and the use of psychoactive substances in the last month and year. The acquired data can be sorted according to gender. The questionnaire is anonymous, primarily used mainly for secondary school students, it is possible to approach other segments of the population. The ESPAD questionnaire is targeted on basic socio-demographic data, the use of legal (tobacco, alcohol) and illicit drugs, opinions and attitudes towards substance abuse, leisure time and social contacts of the respondents, and the views on the availability of illicit drugs. It takes 45–55 minutes to complete.

The questionnaire is used for screen testing in the chosen study population, it is internationally standardized and it allows comparison of results both over time and between European countries. Its limitations consist in usability in the school environment, not in clinical practice, time demands and the need to create an atmosphere of trust at the site of administration (Hibell et al. [online], 2004; Csémy et al. [online], 2006; Hibell et al. [online], 2009).

ESPAD was founded in order to compare data mapping experience with alcohol and drugs among schoolchildren across schools in Europe. Previous research did not permit such comparisons because of inconsistent methodology, or only partially. The first wave of the ESPAD project was held in 1995 and involved 26 European countries, while the second wave in 1999 involved participants from 30 countries. The third wave took place in 2003, when the Czech Republic joined, and the most recent wave—the fifth—was realized in 2011 in 36 countries (Csémy et al. [online], 2006; Hibell et al. [online] 2009; Šťastná ([online], 2010; Csémy and Chomynová, 2012).

Getting information about the nature of abused substances at MU was anonymous, using a questionnaire. The questionnaire included basic identifiers (respondent's age at last birthday, gender, faculty and year of study) and 21 questions, 18 of which were closed, 1 semi-closed and 2 with open-choice answers. The questions were focused on the students' own lifelong experiences with alcohol, tobacco, black coffee and illegal psychotropic substances (cocaine, crack, marijuana, hashish, hashish oil, hallucinogens, specifically Psilocybe magic mushrooms , methamphetamine and other stimulants of ephedrine and amphetamine-type used without a medical prescription, inhalants, heroin, other opiates and sedatives used without a prescription, club drugs), their use in the past 6 months and

30 days, the age of first contact, the frequency of use. The questionnaire also included items related to slot machine gambling, the circumstances of the use of drugs, attitudes towards them and their availability. Other questions were related to basic socio-economic indicators. A short motivation and explanatory text with links to the interviewer were attached to the form (Kachlík [online], 2011b).

In the data collection we used the approval of the University management to use the MU Information System, where the form was available. It helped us greatly simplify administration of the questionnaire, because every full-time student received a link to the form in their electronic agenda on the *http://www.is.muni.cz website*. The respondents did not have to answer all submitted entries, they could decide for themselves whether and how to fill out the questionnaire. Opportunity to participate in the polling was offered to all full-time Masaryk University students, participation was voluntary. Respondents were guaranteed protection of their confidential data which only trained persons involved in the project were allowed to handle.

In total, the electronic form was used to collect data from 9,993 respondents, 4,039 men (40.4%) and 5954 women (59.6%). Most respondents came from the Faculty of Arts (22.1%), Faculty of Education (13.1%) and Faculty of Science (12.7%), the most represented years of study were the first (28. 8%), the second (23.7%) and third (20.6%). The students usually lived in rented accommodation (42.9%), with their parents (28.5%) and in dorms (17.4%). Most of them spent their leisure time in the company of friends (74.5%), with a partner (56.9%) and by sports activities (49.2%). Further characterization of the examined file is available in Tables 1 to 8.

Faculty	**Absolute frequency (n)**	**Relative frequency (%)**
Economics and Administration	762	7,6
Arts	2211	22,1
Computer science	1142	11,4
Medical	815	8,2
Education	1310	13,1
Law	1156	11,6
Science	1274	12,7
Social studies	1095	11,0
Sports studies	228	2,3
Total	9993	100,0

Table 1: Survey of the respondents represented by individual faculties in the entire sample

Year of study	Absolute frequency (n)	Relative frequency (%)
First	2873	28,8
Second	2377	23,7
Third	2057	20,6
Fourth	1351	13,5
Fifth	1288	12,9
Sixth	47	0,5
Total	9993	100,0

Table 2: Survey of the respondents represented by individual years of study in the entire sample

Gender	Absolute frequency (n)	Relative frequency (%)
Men	4039	40,4
Women	5954	59,6
Total	9993	100,0

Table 3: Survey of the respondents represented by gender in the entire sample

Faculty	Men		Women	
	Absolute frequency (n)	Relative frequency (%)	Absolute frequency (n)	Relative frequency (%)
Economics and Administration	342	8.5	420	7.1
Arts	552	13.7	1659	27.9
Computer science	1053	26.1	89	1.5
Medical	218	5.4	597	10.0
Education	238	5.9	1072	18.0
Law	621	15.4	538	9.0
Science	510	12.6	764	12.8
Social studies	380	9.4	715	12.0
Sports studies	125	3.1	103	1.7
Total	4039	100.0	5954	100.0

Table 4: Survey of the respondents represented by gender at individual MU faculties

Faculty	Men		Women	
	Absolute frequency (n)	Relative frequency (%)	Absolute frequency (n)	Relative frequency (%)
First	1223	30.3	1650	27.7
Second	946	23.4	1431	24.0
Third	833	20.6	1224	20.6
Fourth	535	13.2	816	13.7
Fifth	499	12.4	789	13.2
Sixth	3	0.1	44	0.8
Total	4039	100.0	5954	100.0

Table 5: Survey of the respondents represented by gender in each year of study

Group year of study	ECO (%) n = 762	ART (%) n = 2211	IT (%) n = 1142	MED (%) n = 815	EDU (%) n = 1310
First	24.9	27.9	36.2	29.3	32.3
Second	24.3	25.5	23.3	23.7	21.5
Third	21.3	21.6	18.2	22.0	18.3
Fourth	13.4	12.8	11.4	12.0	12.6
Fifth	16.1	12.2	10.9	7.4	15.3
Sixth	-	-	-	5.6	-
Total	100.0	100.0	100.0	100.0	100.0

Group year of study	LAW (%) n = 1156	SCI (%) n = 1274	SOC (%) n = 1095	SPO (%) n = 228
First	20.5	30.9	28.5	21.1
Second	22.0	22.1	26.6	25.9
Third	23.8	18.3	18.6	34.6
Fourth	18.6	14.5	14.4	7.0
Fifth	15.1	14.2	11.9	11.4
Sixth	-	-	-	-
Total	100.0	100.0	100.0	100.0

Table 6: Survey of the respondents represented by years of study at individual MU faculties

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
With parents	2819	28.5	1103	27.7	1716	29.1
With relatives	92	0.9	42	1.1	50	0.8
Dorms	1722	17.4	772	19.4	950	16.1
Rented (private)	4239	42.9	1708	42.9	2531	42.9
In their own apartment / house	851	8.6	309	7.8	542	9.2
Other	152	1.5	48	1.2	104	1.8
Total	9875	100.0	3982	100.0	5893	100.0

Table 7: Predominant type of housing of the respondents during the school year in the entire sample, broken down by gender

Group	All		Men		Women	
Answer	abs.	9.	abs.	9.	abs.	9.
With family	2879	38.8	1223	30.3	2656	44.6
With partner	5685	56.9	1984	49.1	3701	62.2
Further education (apart from school)	3275	32.8	1415	35.0	1860	31.2
Gainful activities	4238	42.4	1642	40.7	2596	43.6
Sporting activities	4912	49.2	2163	53.6	2749	46.2
Artistic activities	2415	24.2	858	21.2	1557	26.2
With friends	7440	74.5	2988	74.0	4452	74.8
Other	1412	14.1	806	20.0	606	10.2

Table 8: Predominant was of leisure time spending in the entire sample, broken down by gender (only positive answers)

The data were electronically recorded, anonymized (all items from MU IS that could uniquely identify the respondents), converted from xml to dbf format and then statistically evaluated using computer programs EPIINFO v.6en (Dean et al., 1994) and Statistica for Windows.7CZ (StatSoft, Inc., 2004). The results are presented as the response rate for the entire sample, then broken down by gender and according to faculty. Sorting by years of study was carried out, but the frequency of the respondents in individual years were very uneven (low in the higher years) so it was dropped from the presentation. Statistical significance of differences between groups were evaluated using statistical tests ×2, Fisher exact, Kruskal-Wallis (Hendl, 2004; Spousta, 2009).

2.2 Other kinds of risky behavior including the so-called virtual drugs

Previous studies (Kachlík and Šimůnek, 1998; Kachlík and Havelková in Řehulka et al., 2007) implemented at MU were not specifically focused on other types of risky behavior of addictive type (esp. non-substance and virtual drugs) and contained only isolated questions concerning slot machines.

In 2009, a study was carried out which was aimed at build an anonymous questionnaire to analyze virtual drugs in a sample of full-time students of all 9 faculties via an electronic web form by statistical analysis of the data obtained.

Based on literature (Davis et al., 2002; Beard, 2005; Aboujaoude et al., 2006; Meerkerk et al., 2009) and previous experience of the author an anonymous questionnaire for university students was compiled, focused on monitoring of prevalence of addictive behavior in the area of non-substance drugs. It was subjected to internal opposition within the Faculty of Education MU and verification using a pilot survey. The questionnaire contained basic identifiers (gender, age, year of study, faculty) and 21 major items. Most of the questions (13) had a closed offer of responses, 6 were semi-enclosed and 2 assignable. The items were focused on risk behavior in non-substance addictions, planning and leisure time of students, the incidence of problems in the educational, health and social areas (Kachlík [online], 2011b).

An electronic questionnaire form in Flash was compiled, debugged and located at *http://boss.ped.muni.cz/drogy*. The data was processed in bulk, the investigators did not collect any information about individuals that would allow beck identification. The data was stored in a database in MS-Access. Data analysis proper started after a suitable conversion.

The sample of full-time university students of all nine faculties has become the research subject. 2,475 respondents were interviewed, recruitment was carried out using the "snowball" method. Students received a link to the questionnaire using the Bulletin Board in the MU Information System, it was desirable that they spread the information on to their fellow students.

Snowballing method is a method of choosing either for research purposes or for the purpose of peer programs. It is based on addressing a small number of people who are chosen to contact several other individuals among their acquaintances. In some cases, the first group (starting) is also trained in research interviews or in providing interventions (EU Council, 2003).

Answers were collected from 2,475 full-time students of all 9 faculties of the Masaryk University, of which 650 were men (26.3%) and 1,825 were women (73.7%). The average age of the respondents was 21.21 years, SD was 2.50 years. Most respondents were from the Faculty of Education (44.4%), the Faculty of Sports Studies (15.2%), the Faculty of Medicine (14.8%) and the Faculty of Arts (11.5%), representation of the respondents from the remaining faculties was Under 10% each. The most widely represented year of study was the first (47.3%), followed by the second (28.9%) and the third (11.7%), the other showed relative frequency of Under 10%. Further characterization of the examined file is available in Tables 9 to 15.

MU faculty	Absolute frequency (n)	Relative frequency (%)
Economics and Administration	30	1.2
Arts	285	11.5
Computer science	50	2.0
Medical	365	14.8
Education	1100	44.4
Law	155	6.3
Science	85	3.4
Social studies	30	1.2
Sports studies	375	15.2
Total	2475	100.0

Table 9: Survey of the respondents represented by individual faculties in the entire sample

Year of study	Absolute frequency (n)	Relative frequency (%)
First	1170	47.3
Second	715	28.9
Third	290	11.7
Fourth	160	6.5
Fifth	120	4.8
Sixth	20	0.8
Total	2475	100.0

Table 10: Survey of the respondents represented by individual years of study in the entire sample

Gender	Absolute frequency (n)	Relative frequency (%)
Men	650	26.3
Women	1825	73.7
Total	2475	100,0

Table 11: Survey of the respondents represented by gender in the entire sample

Year of study	Men		Women	
	Absolute frequency (n)	Relative frequency (%)	Absolute frequency (n)	Relative frequency (%)
First	410	35.0	760	65.0
Second	145	20.3	570	79.7
Third	50	17.2	240	82.8
Fourth	20	12.5	140	87.5
Fifth	25	20.8	95	79.2
Sixth	0	0.0	20	100.0

Table 12: Survey of the respondents represented by gender in each year of study

Faculty	Men		Women	
	Absolute frequency (n)	Relative frequency (%)	Absolute frequency (n)	Relative frequency (%)
Economics and Administration	10	1.5	20	1.1
Arts	50	7.7	235	12.9
Computer science	45	6.9	5	0.3
Medical	25	3.8	340	18.6
Education	200	30.8	900	49.3
Law	85	13.1	70	3.8
Science	10	1.5	75	4.1
Social studies	10	1.5	20	1.1
Sports studies	215	33.2	160	8.8
Total	650	100.0	1825	100.0

Table 13: Survey of the respondents represented by gender at individual faculties

Group Year of study	ECO (%) n = 30	ART (%) n = 285	IT (%) n = 50	MED (%) n = 365	EDU (%) n = 1100
First	50.0	26.3	40.0	23.3	47.7
Second	50.0	15.8	20.0	31.5	35.0
Third	0.0	12.3	30.0	38.3	6.4
Fourth	0.0	19.3	0.0	1.4	7.7
Fifth	0.0	26.3	10.0	0.0	3.2
Sixth	-	-	-	5.5	-
Total	100.0	100.0	100.0	100.0	100.0

Group Year of study	LAW (%) n = 155	SCI (%) n = 85	SOC (%) n = 30	SPO (%) n = 375
First	87.1	23.5	33.3	76.0
Second	9.7	58.8	16.7	20.0
Third	3.2	0.0	16.7	2.7
Fourth	0.0	0.0	33.3	1.3
Fifth	0.0	17.7	0.0	0.0
Sixth	-	-	-	-
Total	100.0	100.0	100.0	100.0

Table 14: Survey of the respondents represented by years of study at individual faculties

Most respondents spend their leisure time with friends (73.5%), with a partner (62.4%), and with their family (58.4%). Sporting activities are used by 55.6% of the sample, 38.8% earn extra money, 32.3% spend their time by further self-education beyond the current curriculum, artistic activities are used by 27.1% and 5.5% spend their time otherwise. "Other" most frequently involved: resting, care for pets, computer entertainment, preparation for school.

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
With family	1445	58.4	245	37.7	1200	65.8
With partner	1545	62.4	290	44.6	1255	68.8
Further education (beyond curriculum)	800	32.3	180	27.7	620	34.0
Making extra money	960	38.8	235	36.2	725	39.7
Sports	1375	55.6	405	62.3	970	53.2
Art	670	27.1	80	12.3	590	32.3
With friends	1820	73.5	405	62.3	1415	77.5
Other	135	5.5	30	4.6	105	5.8

Table 15: Predominant ways of spending leisure time, situation in the entire sample broken down by gender (positive replies)

Individual characters of the questionnaire were subjected to statistical analysis using statistical packages EPIINFO v.6en (Dean et al., 1994) and Statistica for Windows, v.7CZ (StatSoft, Inc., 2004). The sample was sorted according to gender and faculty, characterized by descriptive statistics. The significance of differences between groups after sorting was verified for categorical type data using statistical tests: χ^2 and its modifications according to Yates and Kruskal-Wallis, Fisher's exact test (Hendl, 2004; Spousta, 2009).

2.3 Mapping activities and quality of drug prevention

The main research objective was to map activities and quality of primary prevention of pathological addiction in a sample of full-time MU students. Further outlines tasks included building an original questionnaire, intended for description of leisure and preventive activities at MU and outside, focused on the experiences and needs of students in the field of prevention of social pathologies with an emphasis on behavioral addictions. Another aim was to strengthen implementation of preventive activities at the faculties.

The author tried to obtain a standardized questionnaire targeted at primary prevention of addiction, but despite having addressed a number of institutions (Faculty of Medicine, Prague Public Health Institute, regional health authorities) no such document was available. Therefore he compiled his own non-standardized form.

Information was obtained in 2007 anonymously via the questionnaire that contained basic identifiers (age, gender, faculty, year of study) and 21 questions, of which 16 had closed and 5 had semi-closed choice of answers. The questions were targeted at the previous experience of the respondents with primary addiction prevention in high school and at the University, systematic nature and offer of prevention, types of prevention activities and subjective evaluation of them, and needs and wishes of students. The electronic version of the questionnaire was transformed into interactive graphics (a Flash application) and placed on a publicly accessible website at *http://boss.ped.muni.cz/drogy*. At the same time a collecting database was created and verified where the answers of the respondents were stored (Kachlík [online], 2011b).

The form contained, before the questions proper, a brief information on the project, its intention and investigators, along with their contact addresses. Those interested in the study were free to decide whether they would participate in the questioning or not. The university management was informed of the intended action and it was approved. The students were addressed through a communication highlighted on the Bulletin Board of the MU Information System. Recruitment of the respondents was conducted using the "snowball" method (EU Council, 2003).

A sample of students from all 9 faculties of the Masaryk University became the research subject. There were 2,176 respondents in total—full-time students, including 592 men (27.2%) and 1584 women (72.8%). The average age of the respondents in the entire sample was 21.6 years, SD was 2.8 years. Most respondents were from the Faculty of Arts (23.5%), the Faculty of Education (21.3%) and the Faculty of Science (15.4%), the percentage of students from other faculties was 10% or less. Most students surveyed were from the first year of study (45.6%), followed by the second and third years, both at 16.2%. Further characterization of the examined file is available in Tables 16 to 21.

Faculty	Absolute frequency (n)	Relative frequency (%)
Economics and Administration	144	6.6
Arts	512	23.5
Computer science	64	2.9
Medical	176	8.1
Education	464	21.3
Law	240	11.0
Science	336	15.4
Social studies	208	9.6
Sports studies	32	1.6
Total	2176	100.0

Table 16: Survey of the respondents represented by individual faculties in the entire sample

Year of study	Absolute frequency (n)	Relative frequency (%)
First	992	45.6
Second	352	16.2
Third	352	16.2
Fourth	240	11.0
Fifth	240	11.0
Sixth	0	0.0
Total	2176	100.0

Table 17: Survey of the respondents represented by individual years of study in the entire sample

Gender	Absolute frequency (n)	Relative frequency (%)
Men	592	27.2
Women	1584	72.8
Total	2176	100.0

Table 18: Survey of the respondents represented by gender in the entire sample

Faculty	Men		Women	
	Absolute frequency (n)	Relative frequency (%)	Absolute frequency (n)	Relative frequency (%)
Economics and Administration	32	5.4	112	7.0
Arts	48	8.1	464	29.3
Computer science	48	8.1	16	1.0
Medical	48	8.1	128	8.1
Education	112	18.9	352	22.2
Law	144	24.3	96	6.1
Science	96	16.3	240	15.2
Social studies	32	5.4	176	11.1
Sports studies	32	5.4	0	0.0
Total	592	100.0	1584	100.0

Table 19: Survey respondents represented by gender at individual faculties

Faculty	Men		Women	
	Absolute frequency (n)	Relative frequency (%)	Absolute frequency (n)	Relative frequency (%)
First	336	56.8	656	41.4
Second	32	5.4	320	20.2
Third	112	18.9	240	15.2
Fourth	32	5.4	208	13.1
Fifth	80	13.5	160	10.1
Sixth	0	0.0	0	0.0
In total	592	100.0	1584	100.0

Table 20: Survey of the respondents represented by gender in each year of study

Group Year of study	ECO (%) n = 144	ART (%) n = 512	IT (%) n = 64	MED (%) n = 176	EDU (%) n = 464
First	33.4	46.8	75.0	36.3	55.2
Second	11.1	25.0	0.0	18.2	13.8
Third	22.2	9.4	25.0	18.2	13.8
Fourth	22.2	12.5	0.0	18.2	3.4
Fifth	11.1	6.3	0.0	9.1	13.8
Sixth	-	-	-	0.0	-
Total	100.0	100.0	100.0	100.0	100.0

Group Year of study	LAW (%) n = 240	SCI (%) n = 336	SOC (%) n = 208	SPO (%) n = 32
First	26.7	61.8	23.1	50.0
Second	13.3	9.5	23.1	0.0
Third	13.3	4.8	46.1	50.0
Fourth	13.3	14.3	7.7	0.0
Fifth	33.4	9.6	0.0	0.0
Sixth	-	-	-	-
Total	100.0	100.0	100.0	100.0

Table 21: Survey of the respondents represented by years of study at individual faculties

The obtained data were electronically recorded in a database server. When the querying was completed, the data were converted into a format usable for transmitting data to a statistical software (DBF v.4), and subsequently processed using statistical processing programs in EpiInfo v.6en (Dean et al., 1994) and Statistica for Windows v.7en (StatSoft Inc., 2004). Using statistical tests (χ^2, Fisher exact) the data were evaluated for statistical significance of differences among characters when sorting files by gender and faculty (Hendl, 2004; Spousta, 2009).

III

ADDICTIVE BEHAVIOR IN A SAMPLE OF FULL-TIME STUDENTS OF THE MASARYK UNIVERSITY AND PREVENTION OPTIONS

Key to the statistical evaluation

$p < 0.05$	level of significance of difference between groups 5%
$p < 0.01$	level of significance of difference between groups 1%
$p < 0.001$	level of significance of difference between groups 0.1%
–	frequency of the character has not been evaluated
χ^2	chi-square test of goodness of fit
SD	standard deviation
abs	absolute frequency (n)
%	relative frequency (percentage)

3.1 Addictive substances with the character of substances

3.1.1 Tobacco

At least one previous experience with smoking of tobacco was admitted by more than three-quarters of the respondents, with a slight predominance of men.

Group	**All**		**Men**		**Women**	
Answer	abs.	%	abs.	%	abs.	%
No	2128	21.4	784	19.5	1344	22.7
Yes	7825	78.6	3241	80.5	4584	77.3
Total	9953	100.0	4025	100.0	5928	100.0

Table 22: Smoking tobacco during previous life in the entire sample, broken down by gender

Most smoking attempts took place between 15 to 18 (more than 40%) and 10 to 14 (37%) years of age of the respondents. After the age of 18 it was more than one tenth of the respondents. In childhood, up to 10 years of age, about 5% of the respondents experimented with tobacco smoking, men more than twice more often than women.

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
Under 10 years old	433	5.5	269	8.2	164	3.6
10-14 years old	2943	37.4	1241	37.8	1702	37.2
15-48 years old	3576	45.5	1392	42.4	2184	47.7
Over 18 years old	909	11.6	378	11.5	531	11.6
Total	7861	100.0	3280	3280	4581	100.0

Table 23: Age of first tobacco intake in the entire sample, broken down by gender (only those who have ever smoked tobacco)

The analysis of the period of the last consumption of tobacco (only those who have ever smoked) shows that approx. a fifth of the respondents smoked at the time of polling, 17% in the last week, 12% in last month, 15% in the last six months, a third of cases were ex-smokers. A statistically significant difference was found between the frequency of men and women who smoked at the time of the questioning ($p < 0.001$, χ^2), a similar situation was revealed for ex-smokers ($p < 0.01$, χ^2).

Classification of the respondents by faculty revealed that on the day of polling nearly a fifth of the sample of students of the Faculty of Economics and Administration, Education, Law and Social Studies smoked, a quarter of the sample from the Faculty of arts, a sixth of the Faculty of IT and Science, a tenth of the Faculty of Medicine and the Faculty of Sports Studies.

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
Today	1530	19.5	724	22.2	806	17.7
In the last week	1307	16.7	542	16.6	765	16.8
In the last month	949	12.1	394	12.1	555	12.2
In the last six months	1183	15.1	478	14.6	705	15.4
Previously	2865	36.6	1130	34.6	1735	38.0
Total	7834	100.0	3268	100.0	4566	100.0

Table 24: period of the last consumption of tobacco in the entire sample, broken down by gender (only those who have ever smoked tobacco)

3.1.2 Alcoholic beverages

Alcohol was ever tried by 99% of the respondents. Its exceptional consumption (new Yera's Eve, birthdays) was admitted by 14% of the sample (more females, $p < 0.001$, χ^2), more or less regular consumption was admitted by more than 80% of the sample (more males, $p < 0.001$, χ^2).

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
No	89	0.9	46	1.1	43	0.7
Yes, rarely	1364	13.7	417	10.4	947	16.0
Yes	8498	85.4	3562	88.5	1936	83.3
Total	9951	100.0	4025	100.0	5926	100.0

Table 25: Previous drinking of alcoholic beverages in the entire sample, broken down by gender

Maximum occurrence of first contact with alcohol was observed between 10 and 14 and between 15 and 18 years of age, with no major differences between the genders. More than one tenth of the sample tasted an alcoholic drink before the 10th year of age, approximately 3% after 18 years of age.

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
Under 10 years	1175	11.9	504	12.7	671	11.4
10-14 years old	4217	42.8	1727	43.5	2490	42.3
15-18 years old	4188	42.5	1633	41.1	2555	43.4
Over 18 years old	280	2.8	110	2.8	170	2.9
Total	9860	100.0	3974	100.0	5886	100.0

Table 26: Age of first drinking of alcoholic beverages in the entire sample, broken down by gender (only those who have ever drank alcohol)

A tenth of the sample last drank alcoholic beverage at the time of the survey (twice as many men than women responded, $p < 0.001$, χ^2), 60% admitted to drinking alcohol in the last week, a fifth in the last month (15%, 24% of females, $p < 0.001$, χ^2), 5% in the last six months and 2% earlier. Broken down by faculty, 7–14% of the sample of students from the various faculties drank alcohol on the day of the survey, then 57–64% in the last week.

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
Today	1042	10.5	617	15.5	425	7.2
In the last week	6030	61.0	2492	62.6	3538	60.0
In the last month	2014	20.4	600	15.1	1414	24.0
In the last six months	557	5.6	181	4.5	376	6.4
Previously	237	2.4	93	2.3	144	2.4
Total	9880	100.0	3983	100.0	5897	100.0

Table 27: Period of last consumption of alcoholic beverages in the entire sample, broken down by gender (only those who have ever drank alcohol)

3.1.3 Black Coffee

Black coffee was previously tasted by 84% of the respondents, exceptionally by a third (more men, $p < 0.001$, χ^2), more than a half more or less regularly (more women, $p < 0.001$, χ^2).

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
No	1589	16.0	789	19.6	800	13.5
Yes, rarely	3072	30.9	1327	33.0	1745	29.5
Yes	5287	53.1	1908	47.4	3379	57.0
Total	9948	100.0	4024	100.0	5924	100.0

Table 28: Previous drinking of black coffee in the entire sample, broken down by gender

Half of the sample first tasted black coffee between 15 and 18, a fifth between 10 and 14 and in early adulthood. Around 4% of the respondents admitted to drinking black coffee at a time when they were Under 10 years old.

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
Under 10 years	315	3.8	148	4.6	167	3.3
10-14 years old	1903	22.7	719	22.2	1184	23.1
15-18 years old	4549	54.4	1709	52.8	2840	55.3
Over 18 years old	1598	19.1	658	20.3	940	18.3
Total	8398	100.0	3234	100.0	5131	100.0

Table 29: Age of first drinking of black coffee in the entire sample, broken down by gender (only those who have ever drank black coffee)

More than a quarter of the respondents drank black coffee during interrogation or during the week prior to the survey, a fifth in the last month, 15% in the last six months, 15% before. As regards the consumption of black coffee at the day of the survey, there were significant differences between men and women ($p < 0.001$, χ^2), similarly in the case of drinking coffee in the last week ($p < 0.01$, χ^2). At individual faculties, consumption of black coffee on the day of survey was recorded in one fifth to one third of the sample, similarly in the last week.

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
Today	2282	27.3	803	24.8	1479	28.8
In the last week	2248	26.8	809	25.0	1439	28.0
In the last month	1415	16.9	586	18.2	829	16.1
In the last six months	1265	15.1	549	17.0	716	13.9
Previously	1163	13.9	486	15.0	677	13.2
Total	8373	100.0	3233	100.0	5140	100.0

Table 30: Period of last drinking of black coffee in the entire sample, broken down by gender (only those who have ever drank black coffee)

3.1.4 Cannabis products

Marijuana was tried at least once in their life by 60% of the respondents, 66% of males and 55% of females ($p < 0.001$, χ^2).

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
No	4043	40.5	1386	34.3	2657	44.6
Yes	5950	59.5	2653	65.7	3297	55.4
Total	9993	100.0	4039	100.0	5954	100.0

Table 31: Previous use of marijuana in the entire sample, broken down by gender

In the last six months, marijuana was used by 28% of the entire sample, 36% of males and 23% of females ($p < 0.001$, χ^2).

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
No	7150	71.6	2563	63.5	4587	77.0
Yes	2843	28.4	1476	36.5	1367	23.0
Total	9993	100.0	4039	100.0	5954	100.0

Table 32: Use of marijuana in the last 6 months in the entire sample, broken down by gender

In the last month, marijuana was used by 16% of the entire sample, 23% of males and 11% of females ($p < 0.001$, χ^2).Broken down by faculties, marijuana users in the last month ranged from 7.4 to 21.8%.

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
No	7371	83.8	3095	76.6	5276	88.6
Yes	1622	16.2	944	23.4	678	11.4
Total	9993	100.0	4039	100.0	5954	100.0

Table 33: Use of marijuana in the last 30 days in the entire sample, broken down by gender

Group **Answer**	**ECO (%)** n = 762	**ART (%)** n = 2211	**IT (%)** n = 1142	**MED (%)** n = 815	**EDU (%)** n = 1310
No	82.5	81.3	81.4	92.6	88.3
Yes	17.5	18.7	18.6	7.4	11.7
Total	100.0	100.0	100.0	100.0	100.0
Group **Answer**	**LAW (%)** n = 1156	**SCI (%)** n = 1274	**SOC (%)** n = 1095	**SPO (%)** n = 228	
No	84.5	85.2	78.2	80.3	
Yes	15.5	14.8	21.8	19.7	
Total	100.0	100.0	100.0	100.0	

Table 34: Use of marijuana in the last 30 days broken down by faculty

Maximum first use of marijuana was in 15–18 age group (more than 60% in the entire sample for both genders), followed by early adulthood (a quarter). Around a tenth of them tried marijuana between 10 and 14 years of age, individuals (3, all men) even before 10 years of age.

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
Under 10 years	3	0.05	3	0.10	0	0.00
10–14 years old	491	8.39	218	8.30	273	8.40
15–18 years old	3734	63.81	1706	65.30	2028	62.60
Over 18 years old	1624	27.75	684	26.30	940	29.00
Total	5852	100.00	2611	100.00	3241	100.0

Table 35: Age of first use of marijuana in the entire sample, broken down by gender (only those who have ever taken cannabis)

Marijuana was tried by 45% of the sample more than 10 times, 54% of males and 38% of females ($p < 0.001$, χ^2). Approximately a quarter of all respondents were in the "4–10 times" group, 29% of the sample were in "1–3 times" group, 22% of males and 34% of females ($p < 0.001$, χ^2).

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
1–3×	1681	28.7	578	22.1	1103	33.9
4–10×	1538	26.2	634	24.3	904	27.8
More than 10×	2649	45.1	1401	53.6	1248	38.3
Total	5868	100.0	2613	100.0	3255	100.0

Table 36: Frequency of previous use of marijuana in the entire sample, broken down by gender (only those who have ever taken cannabis)

Hashish or hashish oil has been tried at least once by a quarter of the respondents, 31% of males and 19% of females ($p < 0.001$, χ^2).

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
No	7625	76.3	2805	69.4	4820	81.0
Yes	2368	23.7	1234	30.6	1134	19.0
Total	9993	100.0	4039	100.0	5954	100.0

Table 37: Previous use of hashish or hashish oil in the entire sample, broken down by gender

In the last six months it was consumed by 8% of the respondents, 11% of males and 5% of females ($p < 0.001$, χ^2), 4% in the last month (6% of males and 2% of females; $p < 0.001$, χ^2). Broken down by faculties, the frequency of hashish and hashish oil users in the last month ranged from 1.3 to 5.6%.

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
No	9226	92.3	3578	88.6	5648	94.9
Yes	767	7.7	461	11.4	306	5.1
Total	9993	100.0	4039	100.0	5954	100.0

Table 38: Use of hashish or hashish oil in the last 6 months in the entire sample, broken down by gender

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
No	9645	96.5	3807	94.3	5838	98.1
Yes	348	3.5	232	5.7	116	1.9
Total	9993	100.0	4039	100.0	5954	100.0

Table 39: Use of hashish or hashish oil in the last 30 days in the entire sample, broken down by gender

Group Answer	ECO (%) n = 762	ART (%) n = 2211	IT (%) n = 1142	MED (%) n = 815	EDU (%) n = 1310
No	95.4	95.6	96.8	98.7	97.7
Yes	4.6	4.4	3.2	1.3	2.3
Total	100.0	100.0	100.0	100.0	100.0
Group **Answer**	**LAW (%)** n = 1156	**SCI (%)** n = 1274	**SOC (%)** n = 1095	**SPO (%)** n = 228	
No	96.6	97.3	94.4	98.7	
Yes	3.4	2.7	5.6	1.3	
Total	100.0	100.0	100.0	100.0	

Table 40: Use of hashish or hashish oil in the last 30 days, broken down by faculty

The highest frequency first experience with hashish or hashish oil was between 15 and 18 years of age (60%) and in early adulthood (35%). It was most commonly 1–3 experiments (43% of the respondents, 37% of males, 50% of females, $p < 0.001$, χ^2), one fourth took it 4–10 times, one third more than 10 times (39% of males, 24% of females; $p < 0.001$, χ^2).

3.1.5 Hallucinogens

Hallucinogens (according to the responses to the generally asked question) were used at least once in their lives by 7% of the sample, men twice more frequently (10%) than women (5%), $p < 0.001$, χ^2.

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
No	9286	92.9	3619	89.6	5667	95.2
Yes	707	7.1	420	10.4	287	4.8
Total	9993	100.0	4039	100.0	5954	100.0

Table 41: Previous use of hallucinogens in the entire sample, broken down by gender

Specific query directed to the use of magic mushrooms (particularly Psilocybe) shows higher relative frequencies: 13% in the entire sample, 17% by men and 10% by women ($p < 0.001$, χ^2).

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
No	8702	87.1	3341	82.7	5361	90.0
Yes	1291	12.9	698	17.3	593	10.0
Total	9993	100.0	4039	100.0	5954	100.0

Table 42: Previous use of hallucinogenic mushrooms in the entire sample, broken down by gender

In the last six months prior to the survey, use of hallucinogens was admitted by 1.5% of the respondents, 2.8% of males and 0.7% of females ($p < 0.001$, χ^2). In last month, consumption of hallucinogens was admitted by 0.5% of all respondents, 0.9% of males and 0.2% of females ($p < 0.001$, χ^2). Broken down by faculties, the frequency of hallucinogens users in the last month ranged from 0.0 to 0.8%.

Group	**All**		**Men**		**Women**	
Answer	abs.	%	abs.	%	abs.	%
No	9841	98.5	3927	97.2	5914	99.3
Yes	152	1.5	112	2.8	40	0.7
Total	9993	100.0	4039	100.0	5954	100.0

Table 43: Use of hallucinogens in last 6 months in the entire sample, broken down by gender

Group	**All**		**Men**		**Women**	
Answer	abs.	%	abs.	%	abs.	%
No	9942	99.5	4002	99.1	5940	99.8
Yes	51	0.5	37	0.9	14	0.2
Total	9993	100.0	4039	100.0	5954	100.0

Table 44: Use of hallucinogens in previous 30 days in the entire sample, broken down by gender

Group / **Answer**	**ECO (%)** n = 762	**ART (%)** n = 2211	**IT (%)** n = 1142	**MED (%)** n = 815	**EDU (%)** n = 1310
No	99.6	99.2	99.5	99.9	99.8
Yes	0.4	0.8	0.5	0.1	0.2
Total	100.0	100.0	100.0	100.0	100.0
Group / **Answer**	**LAW (%)** n = 1156	**SCI (%)** n = 1274	**SOC (%)** n = 1095	**SPO (%)** n = 228	
No	99.3	99.5	99.4	100.0	
Yes	0.7	0.5	0.6	0.0	
Total	100.0	100.0	100.0	100.0	

Table 45: Use of hallucinogens in previous 30 days, broken down by faculty

In the last six months before the study, hallucinogenic mushrooms were consumed by 2.1% of the entire sample, 3.6% of males and 1.0% of females ($p < 0.001$, χ^2). In the last month prior to the survey, hallucinogenic mushrooms were used by 0.8% of the entire sample, 1.6% of males and 0.2% of females ($p < 0.001$, χ^2). Broken down by faculties, frequency of users of magic mushrooms in the last month ranged from 0.1 to 1.1%.

First contacts with hallucinogens most often fell within the age range of 15–18 years (57% of the respondents who used them, 50% of males, 66% of females: $p < 0.001$, χ^2, and within the early adulthood (41% of users from the entire population, 47% of males, 32% of females: $p < 0.001$, χ^2). Occasionally, hallucinogens were used even in elementary school.

The age of first use of hallucinogenic mushrooms copies the period of the first use of hallucinogenic substances in general. First experiments with hallucinogenic mushrooms we most frequently reported in the age group 15–18 years (49% of the respondents who used them, 46% of males, 53% of females: $p < 0.01$, χ^2), and in the early adulthood (49% of the respondents who used, 53% of males, 44% of females: $p < 0.01$, χ^2). Occasionally, hallucinogenic mushrooms were used even in elementary school.

Experiments with hallucinogens (used 1–3 times) were mentioned by 58% of the sample (55% of males, 63% of females, $p < 0.05$, χ^2), 4–10 experiments were taken by 27% of the respondents (no substantial differences between genders), more than 10 uses were reported by 15% of the respondents (18% of males, 11% of females, $p < 0.05$, χ^2).

Group	**All**		**Men**		**Women**	
Answer	abs.	%	abs.	%	abs.	%
1–3×	408	58.3	227	55.1	181	62.8
4–10×	186	26.6	111	26.9	75	26.0
More than 10×	106	15.1	74	18.0	32	11.1
Total	700	100.0	412	100.0	288	100.0

Table 46: Frequency of previous use of hallucinogens in the entire sample, broken down by gender (only those who used)

Mushrooms with hallucinogenic effects were most often ingested—1–3 times (62% of all consumers, 54% of males, 73% of females, $p < 0.001$, χ^2, followed by 4–10 times (26% of all consumers, 30% of males, 21% of females; $p < 0.001$, χ^2), and more than 10 times (11% of all consumers, 16% of males, 6% of females; $p < 0.001$, χ^2).

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
1–3×	777	62.5	360	53.8	417	72.6
4–10×	324	26.1	204	30.5	120	20.9
More than 10×	142	11.4	105	15.7	37	6.4
Total	1243	100.0	669	100.0	574	100.0

Table 47: Frequency of previous use of hallucinogenic mushrooms in the entire sample, broken down by gender (only those who used)

3.1.6 Cocaine and methamphetamine

Approximately 3% of the sample has previously come into contact with cocaine, more males ($p < 0.001$, χ^2) than women.

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
No	9734	97.4	3899	96.5	5835	98.0
Yes	259	2.6	140	3.5	119	2.0
Total	9993	100.0	4039	100.0	5954	100.0

Table 48: Previous use of cocaine in the entire sample, broken down by gender

In the last six months, 0.8% of the respondents have used cocaine with no significant difference between the genders, 0.2% in the last month, again with no differences between the genders. Cocaine was most commonly used after the age of 18, then between 15 and 18. Experiments under the age of 10 were recorded rarely (among males). Almost 70% were maximum 3 repeated attempts, in 20% cocaine was used 4–10 times, a tenth more than 10 times, all without major differences between the genders. Broken down by faculty, cocaine use was reported in the last month with a frequency of 0.0–0.5%.

0.3% of the respondents had previous experience with crack, it was used by only 4 respondents (0.04%) in the last six months and by 3 persons (0.03%) in the last month. Similarly to cocaine, the most experiments with crack were reported between 15 and 18 years of age and in early adulthood. Isolated cases of the first use occurred under the age of 10. 40% of people who used crack experimented with it maximum three times, one fifth 4–10 times, 40% more than 10 times.

Approximately 4% of the respondents had at least one previous experience with methamphetamine (5.4% of males and 3.8% of females, $p < 0.001$, χ^2).

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
No	9551	95.6	3821	94.6	5730	96.2
Yes	442	4.4	218	5.4	224	3.8
Total	9993	100.0	4039	100.0	5954	100.0

Table 49: Previous use of methamphetamine in the entire sample, broken down by gender

It was used by 1% in the last six months before the study, by 0.5% of the respondents in the last months, the difference between consumers by gender is not statistically significant. Broken down by faculty, the respondents reported using methamphetamine with a frequency of 0.0 to 0.8% in the last 30 days.

The first contacts with methamphetamine fell mostly into the age period of 15–18 years and early adulthood, some individuals experimented at a younger age, especially men.

Half of methamphetamine users were experimenting (1–3 times), a fifth used it 4–10 times and one third more than 10 times, with no statistically significant differences between the genders.

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
1–3×	202	47,3	105	50,0	97	44,7
4–10×	89	20,8	45	21,4	44	20,3
More than 10×	136	31,9	60	28,6	76	35,0
Total	427	100,0	210	100,0	217	100,0

Table 50: Frequency of previous methamphetamine use in the entire sample, broken down by gender (only among previous users)

3.1.7 Use of other substances

The most important addictive substances that were observed apart from those identified in this study were other substances of stimulating character outside of methamphetamine (e.g. ephedrine and similar ones), inhalants (organic solvents and their application in the form of fuels, solvents, adhesives, degreasing and cleaning equipment), heroin and other substances of a similar nature (natural, semi-synthetic and fully synthetic), sedatives used without a prescription, pharmacist or other expert's recommendation to deliberately influence the mental state, and club (dance) drugs, whose best-known representative is ecstasy.

Group	All		Men		Women	
Substance	abs.	%	abs.	%	abs.	%
Other amines stimulating	207	2.1	120	3.0	87	1.5
Volatile substances	150	1.5	77	1.9	73	1.2
Heroin	43	0.4	27	0.7	16	0.3
Other opioids	195	2.0	93	2.3	102	1.7
Depressants	756	7.6	237	5.9	519	8.7
Dance drugs	902	9.0	414	10.3	488	8.2

Table 51: Previous use of other drugs in the entire sample, broken down by gender (only positive responses)

Other stimulating amines except methamphetamine were previously used by approx. 2% of the sample (3% of males and 1.5% of females; $p < 0.001$, χ^2). Broken down by faculty, frequency of contact with these substances was reported as ranging from 0.7 to 3.7%. In the last six months, stimulating amines were used by 0.5% of the sample, by 0.2% in the last month (there was no difference between the genders, $p < 0.05$, χ^2). The first experiments with substances of stimulant amines character were similar to methamphetamine in the age category 15–18 and in early adulthood. 56% of the respondents used stimulating amines 1–3 times, one quarter 4–10 times and one fifth more than 10 times. Differences between the genders were not statistically significant.

Volatile organic compounds for deliberate inhalation were previously used by 1.5% of the entire sample (1.9% of males and 1.2% of females; $p < 0.01$, χ^2). Broken down by faculty, the frequency of contact with these substances in previous life was reported as ranging

from 0.0 to 2.2%. In the last six months prior to the survey 0.2% respondents admitted to inhaling (0.3 men and 0.2% of females, $p < 0.05$, χ^2), 0.1% of the population in the last month, without distinction between genders. Half of the users tried inhalants at age 15–18, one third (slightly more men) after the age of 18, one seventh in between 10 and 14 years (slightly more women than men). Several men (4) said they first sniffed volatile organic compounds aged younger than 10 years. Among sniffers, the thirds only experimented (1–3 times), one fifth inhaled volatile substances 4–10 times and 15% more than 10 times.

Heroin was at least once used by 0.4% of the sample (0.7% of males and 0.3% of females; $p < 0.01$, χ^2). Broken down by faculty, frequency of previous contact with heroin was reported between 0.0 to 0.9%. In the last six months, 0.06% of the sample used it, almost exclusively men ($p < 0.05$, Fisher exact). In the previous 30 days, heroin consumption was admitted by 5 persons (0.05%), all males ($p < 0.05$, Fisher exact). The first contacts with heroin mostly fall within 15–18 years of age (40% of the sample, 23% of males, 69% of females, $p < 0.01$, χ^2) and in early adulthood (52% of the sample, 65% of males, 31% of females; $p < 0.05$, χ^2). Some men experimented with heroin under the age of 10. In frequency of previous use of heroin, no significant differences between the genders were found. 60% of the population have tried heroin 1–3 times, one fifth 4–10 times and one-fifth more than 10 times.

Other opioids, heroin excluding, were previously used at least once by 2% of the sample (2.3% of males, 1.7% of females; $p < 0.05$, χ^2). Broken down by faculty, frequency of previous contact with these substances ranged from 0.9 to 3.1%. The use of opioids in the previous six months was admitted by 0.3% of the sample, by 0.14% in the last 30 days, with no significant differences between the genders. Among users of other opioids, there were more than 60% (58% of males and 68% of females, without significant differences) of those who tried it for the first time aged between 15 and 18, one third (37% of males, 22% of females, $p < 0.05$, $\chi^{2)}$ in early adulthood, approx. 6% (1% of males, 10% of females; $p < 0.05$, χ^2) between 10 and 14 and 2% at Under 10 years (only males, $p < 0.05$, Fisher exact). Users of other opiates were mostly experimenting (1–3 times, 54% of the entire sample, 60% of males, 50% of females, without significant differences). One third of the sample used it 4–10 times, 14% more than 10 times, with no significant differences between the genders.

Depressant drugs (to induce sleep, calm, suppress pain, fear) without a prescription or expert advice were previously used least once by 8% of the respondents (6% of males and 9% of females, $p < 0.001$, χ^2). Broken down by faculty, frequency of previous contact with these substances ranged from 3.9 to 10.0%. In the last six months prior to the study, these substances were used by 2.6% of the sample (1.9% of males and 3.1% of females, $p < 0.001$, χ^2), 0.9% of the sample in the last month (0.6% of males, 1.1% of females; $p < 0.05$, χ^2). Approximately half of the users willingly took depressants for the first time took in early adulthood, 40% between 15 and 18 years of age, 7% aged 10–14, 1% under the age of 10. Depressant agents were used 1–3 times by 44% (with no significant differences between the genders), 4–10 times by 35% of the sample (29% of males, 37% of females, $p < 0.05$, χ^2), 10 times by more than 22% of consumers (25% of males, 20% of females, without significant differences).

Club (dance, designer) drugs, esp. ecstasy were previously used at least once by 9% of the respondents (10% of males and 8% of females, $p < 0.001$, χ^2). Broken down by faculty, frequency of previous contact with these substances ranged from 5.0 to 14.5%. In the past

6 months, club drugs were consumed by 2.1% of the sample (2.5% of males and 1.9% of females, without significant differences), in the last 30 days by 0.7% of the sample (1% of males and 0.5% of females $p < 0.01$, χ^2). Age of first experience with drugs with club drugs was over 18 years by one-half of the users, and between 15 to 18 years for the other half, with no significant differences between the genders. There have been isolated cases of first consumption between 10–14 years of age, with one male at 10 years of age. 59% of the sample used club drugs experimentally 1–3 times, one quarter 4–10 times, less than one-fifth more than 10 times.

3.1.8 Gambling

To complement the questions focused on issues of substance abuse we added a set of questions mapping gambling. This item should be of a complementary nature, as it was mapped in detail by another study focusing on potentially risky behavior related to non-substance drugs. Slot machines (gaming and gambling) were at least once played by 38% of the respondents (51% of males and 29% of females, $p < 0.001$, χ^2).

Group	**All**		**Men**		**Women**	
Answer	abs.	%	abs.	%	abs.	%
No	6162	62.0	1975	49.3	4187	70.7
Yes	3771	38.0	2035	50.7	1736	29.3
Total	9933	100.0	4010	100.0	5923	100.0

Table 52: Previous slot machine gambling in the entire sample, broken down by gender

In the last six months prior to the survey, 16% of the sample played on slot machines (20% of males, 11% of females, $p < 0.001$, χ^2). In the last month prior to the survey, 6% of the sample admitted to having played slot machines (9% of males, 3% of females, $p < 0.001$, χ^2). Broken down by faculty, frequency of playing on slot machines in the last month before the study ranged from 3.8 to 13.8%.

Most players (36%, 38% of males and 33% of females, $p < 0.01$, χ^2) first encountered slot machines aged 15–18, a third (28% of males, 34% of females, $p < 0.001$, χ^2) after reaching 18th year of life, a quarter at 10–14 years, a tenth at Under 10 years of age (both without significant differences between the genders).

One to three encounters with gambling were admitted by 66% of those who ever played the slot machines (55% of males, 80% of females, $p < 0.001$, χ^2), 22% played 4–10 times (28% of males, 17% of females, $p < 0.001$, χ^2), 11% more than 10 times (17% of males, 4% of females, $p < 0.001$, χ^2).

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
1–3×	2461	66.3	1122	55.4	1339	79.4
4–10×	837	22.5	556	27.5	281	16.7
More than 10×	414	11.2	347	17.1	69	4.0
Total	3712	100.0	2025	100.0	1687	100.0

Table 53: Frequency of previous playing slot machines in the entire sample, broken down by gender (only those who have ever played)

3.1.9 Person who motivated students to use drugs

The respondents were most often motivated to use drugs by their friends (51% of responses in the entire sample, 58% of the responses were men, 47% were women), followed by the influence of the partner—6% of all responses, 2% of males and 8% of females. Casual acquaintances were involved in motivation to use drugs in 5% of the entire sample, 6% of males and 5% of females. Relative frequency of influence of others does not exceed 3% (another person—2.7%, siblings—21%, 1.7%—parents, physician or a pharmacist—1.1%, drug dealer—0.3%).

Group	All (n = 9993)		Male (n = 4039)		Female (n = 5954)	
Answer	abs.	%	abs.	abs.	%	abs.
Parents	166	1.7	45	166	1.7	45
Siblings	209	2.1	76	209	2.1	76
Partner)	558	5.6	89	558	5.6	89
Friends	5102	51.1	2326	5102	51.1	2326
Random people	528	5.3	227	528	5.3	227
Drug traffickers	28	0.3	20	28	0.3	20
Physician/pharmacist	109	1.1	25	109	1.1	25
Other person	273	2.7	164	273	2.7	164

Table 54: Person who motivated the respondent to use drugs in the entire sample, broken down by gender (excluding nicotine, alcohol, caffeine and medications given legally, only positive answers are mentioned)

3.1.10 Encounters with drug traffickers

When it comes to encounters between students and drug traffickers, nobody reported using street dealers.12% of the respondents (16% of males and 9% of females) were addressed by a student dealer, with 4% of the sample (6% of males and 3% of females) it was a person who studied at a Masaryk University faculty, 2 % of the sample (4% of males and 1% of females) it was a student from the same faculty.

Group	All (n = 9993)		Male (n = 4039)		Female (n = 5954)	
Answer	abs.	%	abs.	abs.	%	abs.
Street dealer	0	0.0	0	0	0.0	0
University student dealer	1198	12.0	637	1198	12.0	637
MU student dealer	409	4.1	249	409	4.1	249
Same faculty student dealer	212	2.1	147	212	2.1	147

Table 55: Encounters with drug traffickers in the entire sample, broken down by gender (only positive answers are mentioned)

Sorting of the sample by individual faculties once again showed that no respondent used street dealers. In the range of 8.8 to 14.5% (most at the Faculty of Sports Studies, least at the Faculty of Medicine) the respondents reported that the drug dealer was a university student, from 2.0 to 6.1% of the respondents admitted that they were students of the Masaryk University (most at the Faculty of Social Studies, least at the Faculty of Medicine), 0.7 to 3.4% reported that the dealer was a student of the same faculty where they studied (most at the Faculty of Law, least at the Faculty of Medicine).

Group / Answer	ECO (%) n = 762	ART (%) n = 2211	IT (%) n = 1142	MED (%) n = 815	EDU (%) n = 1310
Street dealer	0.0	0.0	0.0	0.0	0.0
University student dealer	14.4	11.4	13.3	8.8	9.5
MU student dealer	5.5	3.1	3.9	2.0	3.2
Same faculty student dealer	3.1	1.4	3.2	0.7	1.1
Group / Answer	**LAW (%) n = 1156**	**SCI (%) n = 1274**	**SOC (%) n = 1095**	**SPO (%) n = 228**	
Street dealer	0.0	0.0	0.0	0.0	
University student dealer	13.3	11.5	14.2	14.5	
MU student dealer	5.9	3.9	6.1	4.8	
Same faculty student dealer	3.4	1.9	2.7	2.2	

Table 56: Encounters with drug traffickers broken down by faculty (only positive answers are mentioned)

3.1.11 Experience with adulterated or "cut" drugs

One or two encounters with adulterated or cut drugs were admitted by 9% of the respondents, 12% of males and 8% of females ($p < 0.001$, χ^2). Three or more encounters with "junk" drugs was reported by 3% of the sample (5% of males and 2% of females; $p < 0.001$, χ^2).

Group	All		Male		Female	
Answer	abs.	%	abs.	%	abs.	%
No, never	8069	87,6	3075	83,2	4994	90,6
Yes, 1–2 times	857	9,3	438	11,8	419	7,6
Yes 3 and more times	283	3,1	184	5,0	99	1,8
Total	9209	100,0	3697	100,0	5512	100,0

Table 57: Experience with fake or "cut" drugs in the entire sample, broken down by gender (excluding nicotine, alcohol, caffeine and medications given legally)

When sorting the sample according to individual faculties it has shown that one or two encounters with adulterated or "cut" drug was experienced by 5.9 to 10.8% of the students (most at the Faculty of Arts, least at the Faculty of Medicine). Three times and more frequent contact with such substances has been reported by 1.3 to 4.5% of the students (most at the Faculty of Social Studies, leas at the Faculty of Medicine).

3.1.12 Reasons that led to drug use

Dominant reasons for the use of drugs were recognition by others (mentioned by 44% of the respondents), curiosity (27%), evoking of pleasant feelings (15%), release of psychological stress (6%) and spirituality (5%). Relative frequency of occurrence for other reasons does not exceed 5%. In men, the ranking of reasons depending on the frequency remained substantially the same as in the entire sample, with emphasis on inducing pleasant sensations, with slightly higher preference for spirituality, self-understanding and relationship to sex. In women, the first four rankings follow the reasons in the entire sample, with an emphasis on the recognition by others and slightly higher preferences for suppression of unpleasant feelings and health problems.

Group	All		Men		Women	
Reason	abs.	%	abs.	%	abs.	%
Recognition by others	4359	43.5	1312	32.5	3047	51.2
Curiosity	2743	27.4	1195	29.6	1548	26.0
Evoke pleasant feelings	1521	15.2	748	18.5	773	13.0
Releasing of mental stress	580	5.8	201	5.0	379	6.4
Spirituality	507	5.1	310	7.7	197	3.3
Suppression of unpleasant feelings	328	3.3	119	2.9	209	3.5
Understanding the world and oneself	296	3.0	150	3.7	146	2.5
Suppression of health problems	249	2.5	79	2.0	170	2.9
Improved performance	181	1.8	89	2.2	92	1.5
Need for sociability	170	1.7	73	1.8	97	1.6
Integration into the group	153	1.5	64	1.6	89	1.5
Relation to sex	131	1.3	71	1.8	60	1.0

Table 58: Reasons for drug use in the entire sample, broken down by gender (excluding nicotine, alcohol, caffeine and medications given legally; listed by respondents as the most important and decreasing in order of frequency)

3.1.13 Availability of selected substances

The respondents identified cannabis (58%), followed by dance drugs (10%) and hallucinogens (9%) as the most easily available. Other substances have been harder to come by (methamphetamine and other stimulating amines are very easily available for 4% of the sample, opioids excluding heroin to 3%, cocaine and crack cocaine for 2%, heroin for 1%). Similar views were recorded in classification by sex with a somewhat lower relative response rate by women.

In assessment of substance drugs availability in a sample of students of different faculties, very easily obtainable are marijuana (cited by 46 to 61%), followed by club drugs (6.6 to 10.3%) and hallucinogens (5.2–8.6%). Other drugs are easily available for less than 5% of the from individual faculties: stimulating amines for 2.9 to 4.7%, cocaine and crack cocaine for 0.4–2.2%, heroin for 0.2 to 1.2%, other opioids for 1.4 to 2.5%.

Group	**All**		**Men**		**Women**	
Substance	abs.	%	abs.	%	abs.	%
Marijuana	5088	58.1	2137	59.4	2951	57.3
Stimulating amines	326	4.3	153	4.9	173	3.9
Cocaine, crack	117	1.6	58	1.9	59	1.4
Hallucinogens	680	9.0	300	9.6	380	8.5
Dance drugs	788	10.3	348	11.1	440	9.7
Heroin	84	1.1	46	1.5	38	0.9
Other opioids	206	2.9	96	3.3	110	2.6

Table 59: Very easy availability of selected drugs in the entire sample, broken down by gender

Group / **Substance**	**ECO (%)** n = 693	**ART (%)** n = 2053	**IT (%)** n = 1045	**MED (%)** n = 757	**EDU (%)** n = 1216
Marijuana	48.3	57.9	51.0	45.7	58.0
Stimulating amines	3.3	4.6	3.3	3.2	3.0
Cocaine, crack	2.2	1.4	1.3	1.1	1.4
Hallucinogens	5.6	8.4	6.9	5.2	7.7
Dance drugs	7.4	9.6	7.8	6.6	9.2
Heroin	1.2	1.0	1.2	1.1	0.8
Other opioids	2.5	2.4	2.5	2.0	2.5

Group / **Substance**	**LAW (%)** n = 1062	**SCI (%)** n = 1153	**SOC (%)** n = 1016	**SPO (%)** n = 214
Marijuana	59.0	53.0	61.4	54.7
Stimulating amines	3.4	2.9	3.1	4.7
Cocaine, crack	1.5	1.0	0.4	1.4
Hallucinogens	6.4	8.4	8.6	5.6
Dance drugs	9.9	6.6	9.3	10.3
Heroin	1.0	0.9	0.2	0.5
Other opioids	2.0	2.5	1.4	1.9

Table 60: Very easy availability of selected drugs broken down by faculty

3.1.14 Use of selected substances in a circle of acquaintances

When mapping drug use in a circle of acquaintances, respondents first reported marijuana (mentioned by 65%), followed by club drugs (17%), hallucinogens (16%) and stimulating amines (methamphetamine and others—8%). The relative frequency of use of other substances in the circle of acquaintances did not exceed 5% (other opioids excluding heroin 4%, cocaine and crack cocaine—3%, heroin—1%. Similar ranking was retained when broken down by gender with a somewhat lower relative frequency of some women's responses.

Group	**All**		**Men**		**Women**	
Answer	abs.	%	abs.	%	abs.	%
Marijuana	6517	65.2	2694	66.7	3823	64.2
Stimulating amines	814	8.1	330	8.2	484	8.1
Cocaine, crack	311	3.1	125	3.1	186	3.1
Hallucinogens	1580	15.8	695	17.2	885	14.9
Dance drugs	1702	17.0	700	17.3	1002	16.8
Heroin	104	1.0	49	1.2	55	0.9
Other opioids	416	4.2	174	4.3	242	4.1

Table 61: Drug use in a circle of acquaintances in the entire sample, broken down by gender (only positive answers)

3.1.15 Respondents' attitudes to selected risk activities

Attitudes toward regular daily consumption of 20 or more tobacco cigarettes differs by gender. In the entire sample, 6% of the sample agree with smoking, broken down by gender it is 9% of males and 4.5% of females ($p < 0.001$, χ^2). Relatively few respondents (5%) cannot form an opinion, the rest condemns smoking.

Broken down by individual faculties, this form of risky behavior is approved the least by the students of the Faculty of Medicine and Faculty of Sports Studies, while it was most approved by students of the Faculty of Law and the Faculty of Arts, even though there was less than a tenth of them.

Group	**All**		**Men**		**Women**	
Answer	abs.	%	abs.	%	abs.	%
I approve	626	6.3	363	9.1	263	4.5
I disapprove	8724	88.4	3397	85.2	5327	90.5
I do not know	519	5.3	225	5.6	294	5.0
Total	9869	100.0	3985	100.0	5884	100.0

Table 62: Attitudes toward regular smoking of 20 or more cigarettes a day in the entire sample, broken down by gender

Group Answer	ECO (%) n = 756	ART (%) n = 2183	IT (%) n = 1129	MED (%) n = 807	EDU (%) n = 1296
I approve	5.7	7.9	7.5	2.6	4.2
I disapprove	89.7	85.5	87.7	94.7	91.2
I do not know	4.6	6.6	4.8	2.7	4.6
Total	100.0	100.0	100.0	100.0	100.0
Group **Answer**	**LAW (%)** n = 1145	**SCI (%)** n = 1254	**SOC (%)** n = 1073	**SPO (%)** n = 226	
I approve	8.1	4.7	8.5	3.1	
I disapprove	87.8	89.6	84.3	92.5	
I do not know	4.1	5.7	7.2	4.4	
Total	100.0	100.0	100.0	100.0	

Table 63: Attitudes toward regular smoking of 20 or more cigarettes a day broken down by faculty

A little less "hard" views were identified when assessing opinions on regular consumption of marijuana. One tenth of the entire sample approves, 16% of males and 6% of females ($p < 0.001$, χ^2). Compared to tobacco, the number of people who cannot clearly decide increased (from 5% to 10%).

Broken down by individual faculties, this form of risky behavior was approved the least by the students of the Faculty of Medicine and the Faculty of Education, while it was approved the most by the students of the Faculty of Computer Science and the Faculty of Social Studies—more than a tenth.

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
I approve	995	10.1	620	15.6	375	6.4
I disapprove	7881	79.9	2933	73.7	4948	84.1
I do not know	984	10.0	426	10.7	558	9.5
Total	9860	100.0	3979	100.0	5881	100.0

Table 64: Attitudes toward regular smoking of marijuana in the entire sample, broken down by gender

Group Answer	ECO (%) n = 754	ART (%) n = 2178	IT (%) n = 1126	MED (%) n = 806	EDU (%) n = 1297
I approve	8.2	12.0	13.3	2.8	5.2
I disapprove	82.4	76.7	76.5	90.4	86.8
I do not know	9.4	11.3	10.2	6.8	8.0
Total	100.0	100.0	100.0	100.0	100.0
Group **Answer**	**LAW (%)** n = 1145	**SCI (%)** n = 1254	**SOC (%)** n = 1074	**SPO (%)** n = 226	
I approve	11.0	9.1	15.8	9.7	
I disapprove	80.5	80.1	71.2	81.5	
I do not know	8.5	10.8	13.0	8.8	
Total	100.0	100.0	100.0	100.0	

Table 65: Attitudes toward regular smoking of marijuana broken down by faculty

Views of the questioned students on the experimental use of drugs with unacceptable risk (i.e. "hard" drugs) is similar to views on a regular tobacco consumption. In the entire sample, 5% (8% of males, 3% of females, $p < 0.001$, χ^2) agree. Slightly more people cannot judge the risk (6.5% of the sample, more men), the rest rejects experimenting.

Broken down by individual faculties, experiments with "hard" drugs were the least approved by the students of the Faculty of Medicine of the Faculty of Education. Most affirmative responses came from the Faculty of Arts and the Faculty of Social Studies, even though they represented under 10%.

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
I approve	530	5.4	329	8.3	201	3.4
I disapprove	8676	88.1	3334	83.8	5342	91.1
I do not know	638	6.5	317	8.0	321	5.5
Total	9844	100.0	3980	100.0	5864	100.0

Table 66: Attitudes to experiments with "hard" drugs in the entire sample, broken down by gender

Group **Answer**	**ECO (%)** n = 756	**ART (%)** n = 2171	**IT (%)** n = 1127	**MED (%)** n = 807	**EDU (%)** n = 1288
I approve	4.9	7.0	6.3	2.5	3.2
I disapprove	89.9	85.6	86.2	94.5	91.5
I do not know	5.2	7.4	7.5	3.0	5.3
Total	100.0	100.0	100.0	100.0	100.0
Group Answer	**LAW (%)** n = 1142	**SCI (%)** n = 1256	**SOC (%)** n = 1072	**SPO (%)** n = 225	
I approve	5.1	4.3	7.7	6.7	
I disapprove	88.9	89.7	82.2	88.4	
I do not know	6.0	6.0	10.1	4.9	
Total	100.0	100.0	100.0	100.0	

Table 67: Attitudes to experiments with "hard" drugs broken down by faculty

Compared to the previous question, the respondents are much more benevolent to the experimental use of materials with acceptable risk (i.e. "soft" or "light" drugs). 24% of the respondents approve, 31% of males and 19% of females ($p < 0.001$, χ^2). Approximately 14% of the sample cannot take a clear position, the rest clearly disapproves of such experiments.

Broken down by individual faculties, this type of experiment is the least approved by the students of the Faculty of Medicine and the Faculty of Education, while it the most approved by the students of the Faculty of Social Studies and the Faculty of Sports Studies (one third).

Group	**All**		**Male**		**Female**	
Answer	abs.	%	abs.	%	abs.	%
I approve	2384	24.2	1247	31.4	1137	19.4
I disapprove	6112	62.1	2206	55.5	3906	66.7
I do not know	1340	13.6	524	13.2	816	13.9
Total	9836	100.0	3977	100.0	5859	100.0

Table 68: Attitudes to experiments with hashish, hallucinogens and club drugs in the entire sample

Group Answer	ECO (%) n = 754	ART (%) n = 2174	IT (%) n = 1129	MED (%) n = 803	EDU (%) n = 1289
I approve	20.7	28.5	25.1	14.6	17.8
I disapprove	66.3	56.9	60.2	74.7	69.5
I do not know	13.0	14.6	14.7	10.7	12.7
Total	100.0	100.0	100.0	100.0	100.0
Group **Answer**	**LAW (%)** n = 1144	**SCI (%)** n = 1251	**SOC (%)** n = 1068	**SPO (%)** n = 224	
I approve	23.1	21.5	35.4	30.8	
I disapprove	64.2	64.8	49.0	58.0	
I do not know	12.7	13.7	15.6	11.2	
Total	100.0	100.0	100.0	100.0	

Table 69: Attitudes to experiments with hashish, hallucinogens and club drugs, broken down by faculty

The situation changes dramatically when assessing the respondents' opinions on experimentation with marijuana. 60% of the sample approve (66% of males, 56% of females, $p < 0.001$, χ^2), 14% cannot decide (more females), the rest disapproves.

Broken down by faculties, experimenting with marijuana was the least approved by students of the Faculty of Medicine and the Faculty of Education (about a half). At the remaining faculties, experimenting with marijuana was approved by two thirds of the respondents, most by the students of the Faculty of Social Studies.

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
I approve	5932	60.2	2642	66.4	3290	56.0
I disapprove	2487	25.2	894	22.5	1593	27.1
I do not know	1432	14.5	442	11.1	990	16.9
Total	9851	100.0	3978	100.0	5873	100.0

Table 70: Attitudes to experimenting with marijuana in the entire sample, broken down by gender

Group Answer	ECO (%) n = 756	ART (%) n = 2178	IT (%) n = 1126	MED (%) n = 807	EDU (%) n = 1294
I approve	63.4	62.6	63.0	52.4	50.5
I disapprove	22.9	22.5	24.0	33.1	32.8
I do not know	13.8	14.9	13.0	14.5	16.7
Total	100.0	100.0	100.0	100.0	100.0
Group **Answer**	**LAW (%)** n = 1145	**SCI (%)** n = 1251	**SOC (%)** n = 1068	**SPO (%)** n = 226	
I approve	60.8	57.3	69.8	65.0	
I disapprove	25.9	26.6	16.5	24.4	
I do not know	13.3	16.1	13.7	10.6	
Total	100.0	100.0	100.0	100.0	

Table 71: Attitudes to experimenting with marijuana broken down by faculty

3.1.16 Opinions on drug legalization

13% of the respondents are firmly opposed to any legalization of illicit drugs (15% of males, 12% of females, $p < 0.01$, χ^2). 53% of the sample would support legalizing selected substances for use e.g. in medicine and pharmacology (40% of males, 62% of females, $p < 0.001$, χ^2). Legalization of "light" drugs (especially cannabis) was approved by a quarter of the respondents (33% of males, 20% of females, $p < 0.01$, χ^2), legalization of all drugs by less than 2% of the sample (3.3% of males, 0, 8% of females; $p < 0.001$, χ^2). Other opinions (mostly related to changes in society's view on drugs and drug legislation) are held by 6% of the respondents (9.5% of males and 4.3% of females, $p < 0.001$, χ^2).

Broken down by individual faculties, 10–18% of the respondents are against legalization of any illicit substances, 42 to 64% are for legalization of some drugs usable against advice and under the supervision of experts. Especially legalization of the so-called "light" drugs is approved by 13–33%, legalization of all now banned substances by 0.8 to 2.9%. Other opinions than the above presented were held by 3–9% of the respondents.

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
Against legalization of any drugs	1303	13.3	577	14.6	726	12.4
For legalization of some drugs	5219	53.3	1584	40.1	3635	62.2
For legalization of some drugs, esp. "light"	2472	25.2	1288	32.6	1184	20.3
For legalization of all drugs	173	1.8	129	3.3	44	0.8
Different opinion	626	6.4	374	9.5	252	4.3
Total	9793	100.0	3952	100.0	5841	100.0

Table 72: Opinions on drug legalization in the entire sample, broken down by gender

Group / Answer	ECO (%) n = 748	ART (%) n = 2168	IT (%) n = 1123	MED (%) n = 794	EDU (%) n = 1285
Against legalization of any drugs	13.8	12.0	15.2	17.5	14.4
For legalization of some drugs	54.8	52.5	41.5	64.5	61.6
For legalization of some drugs, esp. "light"	25.5	27.1	32.3	12.8	18.8
For legalization of all drugs	1.9	1.8	2.1	0.8	0.5
Different opinion	4.0	6.6	8.9	4.4	4.7
Total	100.0	100.0	100.0	100.0	100.0

Group / Answer	LAW (%) n = 1134	SCI (%) n = 1247	SOC (%) n = 1071	SPO (%) n = 223
Against legalization of any drugs	13.1	12.6	9.7	16.2
For legalization of some drugs	48.9	58.3	46.8	52.9
For legalization of some drugs, esp. "light"	27.7	21.0	32.6	27.4
For legalization of all drugs	2.9	1.9	2.6	0.4
Different opinion	7.4	6.2	8.3	3.1
Total	100.0	100.0	100.0	100.0

Table 73: Opinions on drug legalization, broken down by faculty

3.2 Other types of risky behavior including the so-called virtual drugs

3.2.1 Quiz machines

In the entire sample, one-third of the respondents played a quiz machine before, most were males (47.7% vs. 26.0% of females, $p < 0.001$, χ^2). Broken down by faculty, it was evident that previous experience of playing a quiz machine was held by a quarter to two-thirds of the sample, the least at the Faculty of Science, the most at the Faculty of Sports Studies.

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
No	1690	68.3	340	52.3	1350	74.0
Yes	785	31.7	310	47.7	475	26.0
Total	2475	100.0	650	100.0	1825	100.0

Table 74: Previous playing a quiz machine in the entire sample, broken down by gender

More than 13% of the entire sample first played a quiz machine at the age of 15–18, one tenth were older than 18 years. 7.5% of the respondents played for the first time between

10 and 14, 1% of the respondents younger than 10. Men mostly experimented between 15–18 years (23.8%), 9.6% of women between 15 and 18 and 9.6% after 18. Women first tried to play quiz machines even under the age of 10 years. The gender differences were statistically significant ($p < 0.01$ or better, χ^2) in all age categories except "over 18."

One sixth of the respondents from the Faculty of Social Studies and one tenth from the Faculty of Computer science tried to play a quiz machine under the age of 10 years, the number was lower at other faculties (5% or less). Most first attempts were situated in ages 10–14 and 15–18 when broken down by faculties.

Group	**All**		**Men**		**Women**	
Answer	abs.	%	abs.	%	abs.	%
Under 10 years	25	1.0	0	0.0	25	1.3
10-14 years old	185	7.5	85	13.1	100	5.5
15-18 years old	330	13.3	155	23.8	175	9.6
Over 18 years old	245	9.9	70	10.8	175	9.6
Did not play + did not respond	1690	68.3	340	52.3	1350	74.0
Total	2475	100.0	650	100.0	1825	100.0

Table 75: Age of the first quiz machine playing in the entire sample, broken down by gender

During the last six months prior to the survey, the respondents most often played quiz machines 1–3 times (7.7%), followed by "4–10 times" (1.0%) and "more than 10 times" (0.4%), with decreasing relative frequency. Nine-tenths of the file have not played quiz machines in the last six months, or did not respond the question. Ranking by categories copies sorting by gender. For men, the relative frequency of all items are at least two-fold higher ($p < 0.001$ in the category "1–3 times", χ^2). A third of the respondents from the Faculty of Computer science have played 1-3 times in the last six months, but maximum 15% from other faculties. Gambling attempts were also much less frequent (max. 2%).

Group	**All**		**Men**		**Women**	
Answer	abs.	%	abs.	%	abs.	%
1–3 times	190	7.7	95	14.6	95	5.2
4–10 times	25	1.0	10	1.5	15	0.8
More than 10 times	10	0.4	5	0.8	5	0.3
Did not play + no answer	2250	90.9	540	83.1	1710	93.7
Total	2475	100.0	650	100.0	1825	100.0

Table 76: Frequency of quiz machine playing in the last six months in the entire sample, broken down by gender

During the last month prior to the survey, 1.8% of the cohort played quiz machines 1–3 times, 0.2% played identically 4-10 times and more than 10 times. Men played quiz

machines in recent months more than women ($p < 0.01$, χ^2), with the exception of "more than 10 times" category, where the situation is reversed. In the last month, 2% of the respondents from the Faculty of Arts and the Faculty of Education played 1–3 times, twice as many people from the Faculty of Sports, 1.3% from the Faculty of Sports Studies played 4–10 times, and 0.5% of the respondents from the Faculty of Education played more than 10 times.

Group	**All**		**Men**		**Women**	
Answer	abs.	%	abs.	%	abs.	%
1–3 times	45	1.8	20	3.1	25	1.4
4–10 times	5	0.2	5	0.8	0	0.0
More than 10 times	5	0.2	0	0.0	5	0.3
Did not play + no answer	2420	97.8	625	96.1	1795	98.4
Total	2475	100.0	650	100.0	1825	100.0

Table 77: Frequency of playing quiz machines in the last month in the entire sample, broken down by gender

In the last week prior to the study, 0.2% of the sample played quiz machines "1–3 times" and "more than 10 times." In the first case it was only men (0.8%, $p < 0.01$, χ^2), in the second case only women (0.3%). In the last week prior to the study, 1.3% of the students of the Faculty of Sports Studies played 1–3 times, 0.5% of the respondents from the Faculty of Education played more than 10 times, while other activities were not recorded for this item when broken down by faculty.

Group	**All**		**Men**		**Women**	
Answer	abs.	%	abs.	%	abs.	%
1–3 times	5	0.2	5	0.8	0	0.0
4–10 times	0	0.0	0	0.0	0	0.0
More than 10 times	5	0.2	0	0.0	5	0.3
Did not play + no answer	2465	99.6	645	99.2	1820	99.7
Total	2475	100.0	650	100.0	1825	100.0

Table 78: Frequency of playing quiz machines in the last week in the entire sample, broken down by gender

3.2.2 Slot machines

One fifth of the respondents have previously played a slot machine, one third (33.8%) of men and 15.3% of women ($p < 0.001$, χ^2). Broken down by faculty, one tenth to one half of the respondents played slot machines—the least at the Faculty of Science, Faculty of Law and Computer Science faculty, the most at the Faculty of Economics and Administration and the Faculty of Sports Studies.

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
No	1975	79.8	430	66.1	1545	84.7
Yes	500	20.2	220	33.8	280	15.3
Total	2475	100.0	650	100.0	1825	100.0

Table 79: Previous slot machine playing in the entire sample, broken down by gender

The first experiments with playing the slot machines in the entire sample were most frequently reported in the age categories of 15–18 years (8.7%) and over 18 years (7.3%). 3.6% of the sample first played aged 10–14 years, 0.6% below 10 years. This situation follows the age of the first slot machine playing for men, while the category of "more than 18 years" is dominant among women, other categories follow with a decreasing relative frequency. Gender differences were statistically significant ($p < 0.01$ or better, χ^2), with the exception of the category of "over 18". Early contacts (under 10 years of age) with slot machines were reported especially at the Faculty of Science, Faculty of Law and eh Faculty of Sports Studies (with a frequency of 3–6%). Higher frequency of encountering slot machines was in the age categories 10–14 and 15–18. Respondents mainly from the Faculty of Education and Faculty of Sports Studies played for the first time after 18.

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
Under 10 years	15	0.6	10	1.5	5	0.3
10–14 years old	90	3.6	45	6.9	45	2.4
15–18 years old	215	8.7	115	17.8	100	5.5
Over 18 years old	180	7.3	50	7.7	130	7.1
Did not play + did not respond	1975	79.8	430	66.1	1545	84.7
Total	2475	100.0	650	100.0	1825	100.0

Table 80: Age of first playing slot machines in the entire sample, broken down by gender

Playing slot machines during the last six months prior to the survey occurred in the entire sample with decreasing relative frequencies in the case of category "1–3 times" (4.6%), "4–10 times" (1.0%) and "more than 10 times" (0.2%). 94% of the sample did not play or did not respond. A similar trend can be observed when broken down by gender, but men showed higher relative frequencies than women (statistical significance $p < 0.01$ and greater, χ^2, except for "4–10 times" category). In the last six months broken down by faculties, the highest frequency of games on slot machines was 1–3 times, especially at the Faculty of Economics and Administration (16.7%) and the Faculty of Sports Studies (12.0%). Around 2% of the sample at the Faculty of Arts and the Faculty of Education reported having played 4–10 times, 1.3% of the respondents from the Faculty of Sports Studies more than 10 times.

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
1–3 times	115	4.6	60	9.2	55	3.0
4–10 times	25	1.0	10	1.5	15	0.8
More than 10 times	5	0.2	5	0.8	0	0.0
Did not play + did not respond	2330	94.2	575	88.5	1755	96.2
Total	2475	100.0	650	100.0	1825	100.0

Table 81: Frequency of playing slot machines in the last six months in the entire sample, broken down by gender

Relative frequency of playing slot machines during the last month prior to the study decreases in inverse proportion to its frequency (1.2% in "1–3 times" category, 0.2% in "4–10 times" in category, 0.0% in "more than 10 times" category). Almost 99% of the sample did not play slot machines or did not respond in in this period. This trend follows the breakdown by gender, only the frequency of games is higher for men (statistical significance $p < 0.01$, χ^2, with the exception of "more than 10 times" category). In the last month, 2.3% of the respondents from the Faculty of Education and 1.3% from the Faculty of Sports Studies played the slot machines 1–3 times, 1.3% of the respondents from the Faculty of Sports Studies 4–10 times, none of the surveyed more than 10 times.

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
1—3 times	30	1.2	15	2.3	15	0.8
4—10 times	5	0.2	5	0.8	0	0.0
More than 10 times	0	0.0	0	0.0	0	0.0
Did not play + did not respond	2440	98.6	630	96.9	1810	99.2
Total	2475	100.0	650	100.0	1825	100.0

Table 82: Frequency of playing slot machines in the last month in the entire sample, broken down by gender

In the last week before the study, 0.2% of the sample played the slot machines 1–3 times. These were only men ($p < 0.01$, χ^2). Broken down by faculty, playing slot machines in the last week was reported only by 1.3% of the respondents from the Faculty of Sports Studies, higher frequencies were not recorded.

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
1–3 times	5	0.2	5	0.8	0	0.0
4–10 times	0	0.0	0	0.0	0	0.0
More than 10 times	0	0.0	0	0.0	0	0.0
Did not play + did not respond	2470	99.8	645	99.2	1825	100.0
Total	2475	100.0	650	100.0	1825	100.0

Table 83: Frequency of playing slot machines in the last week in the entire sample, broken down by gender

3.2.3 Video computer/console games

More than 80% of the entire sample played a video computer/console game slightly more men (83.1% vs. 79.2% of women, $p < 0.05$, χ^2). Broken down by faculty, at least three-quarters to 100% of the respondents played a computer game—the most from the Faculty of Economics and Administration, Computer Science and Law, the least from the Faculty of Medicine and Education.

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
No	490	19.8	110	16.9	380	20.8
Yes	1985	80.2	540	83.1	1445	79.2
Total	2475	100.0	650	100.0	1825	100.0

Table 84: Previous playing video computer/console game in the entire sample, broken down by gender

Age of the first video computer/console game in the entire sample falls mostly into the category of "10–14 years" (43.4%), followed by the category of "under 10 years" (26.5%), "15–18 years" (9.1%) and "over 18 years of age" (1.2%). Women show similar age breakdown of the first video computer/console game. Most men played computer games for the first time under the age of 10 (43.1%), followed by other ages with falling relative frequency. Gender differences are statistically significant at 5% level and better (χ^2), in all age categories. Broken down by faculty, the age of first video computer/console game falls mostly in the period of Under 10 years (Faculty of Science, Economics and Administration, Faculty of Law: half to two-thirds of the respondents), followed by the period between 10 and 14 years (at all monitored faculties with 30–50% frequency of the respondents). The first gaming experience at an older age of the respondents is represented far less, which is especially true after 18 years of age.

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
Under 10 years	655	26.5	280	43.1	375	20.6
10-14 years old	1075	43.4	255	39.2	820	44.9
15-18 years old	225	9.1	5	0.8	220	12.1
Over 18 years old	30	1.2	0	0.0	30	1.6
Did not play + did not respond	490	19.8	110	16.9	380	20.8
Total	2475	100.0	650	100.0	1825	100.0

Table 85: Age of the first video computer/console game in the entire sample, broken down by gender

Frequency of computer games in the entire sample in the last six months prior to the study is dominated by "more than 10 times" category, with relative frequency of 33.5%, followed by the category of "1–3 times" (17.8%) and "4–10 times" (10.7%), while 38% did not play on a computer or console or did not respond the question. Broken down by gender, the situation is analogous, the relative frequencies of playing are higher for men in the category of "more than 10 times", for women in other categories, indicative of less frequent playing. Gender differences are statistically significant in all cases ($p < 0.001$, χ^2). Broken down by faculty, 16–24% of the respondents played a video computer/console game 1–3 times in the last six months, particularly students from the faculties of Computer science, Natural Sciences and Arts. "4–10 times" category was dominated by students of the Faculty of Computer science (80%), the relative frequency of playing at the remaining faculties varies between 7 and 17%. Two-thirds of the respondents from the Faculty of Economics and Administration and the Faculty of Social Studies played more than 10 times, half of the Faculty of Law and Sports Studies, one-third of the faculties of Science, Education and Arts, one tenth of the Faculty of Medicine.

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
1—3 times	440	17.8	65	10.0	375	20.5
4—10 times	265	10.7	40	6.2	225	12.3
More than 10 times	830	33.5	390	60.0	440	24.2
Did not play + did not respond	940	38.0	155	23.8	785	43.0
Total	2475	100.0	650	100.0	1825	100.0

Table 86: Frequency of computer/video game console playing in the last six months in the entire sample, broken down by gender

In the last month prior to the study 20.8% of the sample spent some time playing computer games more than 10 times, 15.2% played 1–3 times, 9.1% 4–10 times. More than a half of sample did not play last month or did not respond. Decreasing frequency of playing by men in the last month is accompanied by decreasing relative frequency (40.8%—14.6%—12.3%), in women, the highest incidence of playing in the last month

was observed in the category of "1–3 times" (16.2%), followed by the category of "more than 10 times" (13.7%) and "4–10 times" (7.1%). There was a significant difference between the responses of men and women in all categories ($p < 0.05$ or better, χ^2). Broken down by faculty, the most frequent answers were "1–3 times" and "more than 10 times" the latter option prevailed in respondents from most faculties (especially from the faculties of Science, Social Studies and Sports Studies). Low level of play was observed among students of the Faculty of Medicine in this period.

Group	**All**		**Men**		**Women**	
Answer	abs.	%	abs.	%	abs.	%
1–3 times	375	15.2	80	12.3	295	16.2
4–10 times	225	9.1	95	14.6	130	7.1
More than 10 times	515	20.8	265	40.8	250	13.7
Did not play + did not respond	1360	54.9	210	32.3	1150	63.0
Total	2475	100.0	650	100.0	1825	100.0

Table 87: Frequency of computer/video game console playing in the last month in the entire sample, broken down by gender

Faculty / **Answer**	**ECO (%)** n=30	**ART (%)** n=285	**IT (%)** n=50	**MED (%)** n=365	**EDU (%)** n=1100
1–3 times	33.3	21.1	10.0	5.5	16.3
4–10 times	33.3	10.5	0.0	5.5	6.4
More than 10 times	16.7	21.1	80.0	6.8	16.8
Did not play + did not respond	16.7	47.3	10.0	82.2	60.5
Total	100.0	100.0	100.0	100.0	100.0

Faculty / **Answer**	**LAW (%)** n=155	**SCI (%)** n=85	**SOC (%)** n=30	**SPO (%)** n=375
1–3 times	25.8	17.7	16.7	10.7
4–10 times	16.2	11.8	0.0	16.0
More than 10 times	29.0	17.6	50.0	33.3
Did not play + did not respond	29.0	52.9	33.3	40.0
Total	100.0	100.0	100.0	100.0

Table 88: Frequency of computer/video game console playing in the last month broken down by faculty

The highest reported frequency of playing computer games in the last week prior to the survey was 1–3 times in the entire sample (14.9%), followed by the other categories with declining relative frequency (9.3% and 6.1%). This trend is also evident when broken down by gender, but relative frequencies of play by men are higher, especially in the categories "4–10 times" and "more than 10 times." Beside "1–3 times" category, statistically significant

difference was also found between the responses of men and women ($p < 0.001$, χ^2). Broken down by faculty, the most frequent answer was "1–3 times", with the exception of 80% of the respondents from the Faculty of Computer science, who played video computer/console games more frequently in the last week. A tenth of the respondents from the Faculty of Sports Studies and almost 17% from the Faculty of Economics and Administration played more than 10 times in the last week.

Group	**All**		**Men**		**Women**	
Answer	abs.	%	abs.	%	abs.	%
1–3 times	370	14.9	110	16.9	260	14.2
4–10 times	230	9.3	140	21.5	90	4.9
More than 10 times	150	6.1	80	12.3	70	3.8
Did not play + did not respond	1725	69.7	320	49.2	1405	77.1
Total	2475	100.0	650	100.0	1825	100.0

Table 89: Frequency of playing video computer/console games in the last week in the entire sample, broken down by gender

In our sample, most respondents spent one hour a day playing video computer/console games (11.3%), followed by "1–3 hours" (7.3%) and "3–5 hours" (1.8%), 79.6% did not play computer games or did not respond. Most men play computer games 1–3 hours per day (20.0%), women less than 1 hour a day (9.6%). Statistically significant differences were found between the answers of men and women ($p < 0.001$, χ^2), with the exception of the category of "more than five hours." Students of the Faculty of Medicine, Faculty of Arts, Faculty of Education and Faculty of Science spend relatively little time playing video computer/console games, while the students of the Faculty of Computer science spend the most time playing video computer/console games (a third of them more than 5 hours per day). Gaming among students of remaining faculties is less popular.

Group	**All**		**Men**		**Women**	
Answer	abs.	%	abs.	%	abs.	%
Less than 1 hour	280	11.3	105	16.2	175	9.6
1–3 hours	180	7.3	130	20.0	50	2.7
3–5 hours	45	1.8	30	4.6	15	0.8
More than 5 hours	0	0.0	0	0.0	0	0.0
Did not play + did not respond	1970	79.6	385	59.2	1585	86.8
Total	2475	100.0	650	100.0	1825	100.0

Table 90: Time spent every day playing games on the computer/video game console in the entire sample, broken down by gender

3.2.4 Using mobile devices

In our sample, 4.6% of people do not own a mobile device (phone or personal communicator) or do not use it as the main device. The rest of the sample is dominated by sending SMS and MMS (56.6%) and telephony (36.0%). The remaining options are sparsely represented, multimedia (audio, image, video) is worth mentioning—reported by 2.4%. The situation described is also evident when broken down by gender. In men, the ratio between messaging and telephony is balanced (1.3 : 1 ratio), they use more multimedia, in women messaging prevails over telephony (1.7 : 1 ratio). Statistically significant differences between the answers broken down according to gender were recorded in the case of SMS and MMS ($p < 0.001$, χ^2), WAP ($p < 0.01$, χ^2) and working with multimedia ($p < 0.001$, χ^2). Respondents from the Faculty of Economics and Administration mainly used telephony on their mobile devices (half), fewer in other ways (SMS, multimedia, etc.). With the respondents from the Faculty of Arts, Faculty of Social Studies and the Faculty of Sports Studies, the ratio is roughly balanced, while SMS prevails with the others (80% of the respondents at the Faculty of Computer science, two thirds at the Faculty of Medicine, Education and Science, 55% at the Faculty of Law) over other ways of mobile device use.

Group	**All**		**Men**		**Women**	
Answer	abs.	%	abs.	%	abs.	%
Calling	890	36.0	230	35.3	660	36.2
Sending SMS, MMS	1400	56.6	290	44.6	1110	60.8
Chatting	5	0.2	0	0.0	5	0.3
Web browsing (WAP)	5	0.2	5	0.8	0	0.0
Playing games	0	0.0	0	0.0	0	0.0
Multimedia	60	2.4	40	6.2	20	1.1
Do not own + did not respond	115	4.6	85	13.1	30	1.6
Total	2475	100.0	650	100.0	1825	100.0

Table 91: Predominant use of mobile devices in the entire sample, broken down by gender

The most common time of daily use is less than one hour (66.9%), followed by "1–3 hours" (19.0%) and "3–5 hours" (2.2%). More than 5 hours a day working with a mobile device was reported by 3.4% of the sample, while 8.5% of the sample do not use mobile device daily. The trend is maintained even when broken down by gender—mobile devices are used by two-thirds of men and nearly 69% of women less than an hour a day, 15.4% of males and 20.3% of females use them 1–3 hours a day. There was a statistically significant difference between the responses in these categories ($p < 0.01$ or better, χ^2). Most respondents from all faculties typically use their mobile devices for less than 1 hour a day (60–83%). Lower frequency of use was reported by respondents from the Faculty of Arts, Faculty of Education and the Faculty of Law, a fifth of the sample from the Faculty of Science and a sixth from the Faculty of Social Studies. One to three hours per day was reported by one tenth of the respondents from the Faculty of Arts, a fifth from the Faculty

of Education and Science, a sixth from the Faculty of Medicine, Faculty of Law and the Faculty of Social Studies, a quarter from the Faculty of Science and the Faculty of Sports Studies. A sixth of students from the Faculty of Economics and Administration use a mobile device for three and more hours, in the remaining cases the frequency is relative, from 0% (Faculty of Computer Science, Faculty of Science and the Faculty of Social Studies) to 5.3% (Faculty of Sports Studies).

Group	**All**		**Men**		**Women**	
Answer	abs.	%	abs.	%	abs.	%
I do not use it daily	210	8.5	120	18.5	90	4.9
Less than 1 hour	1655	66.9	400	61.5	1255	68.8
1–3 hours	570	19.0	100	15.4	370	20.3
3–5 hours	55	2.2	10	1.5	45	2.5
More than 5 hours	85	3.4	20	3.1	65	3.5
Total	2475	100.0	650	100.0	1825	100.0

Table 92: Time per day spent using mobile devices in the entire sample, broken down by gender

3.2.5 Using the Internet

Web surfing is dominant in the entire sample (40.6%), with almost similar relative frequencies of the use of e-mail (16.4%) and web applications (16.2%), followed by social networking (13.7 %) and chatting (7.9%). Other available options are reported infrequently. Sorted by gender, Internet browsing—surfing is first again (57.7%), among men followed by social networking (13.8%), e-mail (10.8%) and chatting (7.9%). Among females, surfing (34.5%) is followed by working with web applications (19.5%), e-mail (18.4%), social networking (13.7%) and chatting (8.8%). Broken down by gender, all options in working with the Internet contained statistically significant differences at the level of 5% or better (χ^2), except for the categories "social networking", "file exchange networking" and "alternative". Among respondents from most MU faculties, web surfing was first (faculties of Arts, Medicine, Education, Law, Science and Faculty of Sports Studies). A tenth to a quarter of the respondents from different faculties work with web applications, with the exception of the Faculty of Computer Science, e-mail is used a tenth to a fifth of the respondents, except for students of the faculties of Economics and Administration, Social Studies and Science. Chatting is very popular with the students of the Faculty of Economics and Administration and Sport Studies, social networking is used by students of all faculties, primarily Social Studies, Science, Economics and Administration, and Law.

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
Surfing the Web	1005	40.6	375	57.7	630	34.5
Web applications	400	16.2	45	6.9	355	19.5
E-mail	405	16.4	70	10.8	335	18.4
Chatting	195	7.9	35	5.4	160	8.8
Blogging	10	0.4	0	0.0	10	0.5
Internet telephony	10	0.4	0	0.0	10	0.5
Social networking	340	13.7	90	13.8	250	13.7
File exchange networking	10	0.4	5	0.8	5	0.3
Other options	100	4.0	30	4.6	70	3.8
Total	2475	100.0	650	100.0	1825	100.0

Table 93: Predominant internet usage in the entire sample, broken down by gender

Most respondents spend 1–3 hours a day by work or entertainment on the Internet (45.5%), followed by the "3–5 hours" (18.4%), "less than 1 hour" (11.5%) and "more than 5 hours "(10.7%). 13.9% are not online every day. Similarly, most men spend 1–3 hours a day on the Internet (36.1%), the same applies to women (48.8%, a difference between the genders is statistically significant at a level of 0.1%, χ^2) followed by "3–5 hours" (19.2% of males and 18.1%of females). Men spend more than five hours a day on the Internet in 16.2% of cases, 13.1% are connected for less than one hour. The situation with women is reverse: 11% less are online for less than 1 hour and 8.8% for more than 5 hours (in this category, the difference between the genders is statistically significant at the level of 0.1%, χ^2). The most frequent response to the question of the length of time spent online when broken down by faculty was 1–3 hours (reported by a third to two-thirds of the respondents), with the exception of the Faculty of Economics and Administration, where more than 80% of the students spend 3–5 hours a day online. 6–17% of the respondents did not have daily Internet connection, with the exception of the faculties of Economics and Administration, Science and Social Studies. One third of the respondents from the Faculty of Computer Science and the Faculty of Social Studies spend more than 5 hours a day on the Internet, while people from other faculties reported lower frequencies (one tenth to one sixth).

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
I am not online every day	345	13.9	100	15.4	245	13.4
Less than 1 hour	285	11.5	85	13.1	200	11.0
1–3 hours	1125	45.5	235	36.1	890	48.8
3–5 hours	455	18.4	125	19.2	330	18.1
More than 5 hours	265	10.7	105	16.2	160	8.8
Total	2475	100.0	650	100.0	1825	100.0

Table 94: Time spent daily by online work or entertainment in the entire sample, broken down by gender

80.8% of all respondents encountered imminent danger in their work or entertainment on the Internet, 73.2% of males and 82.5% of females ($p < 0.001$, χ^2). Broken down by faculty, 67 to 94% of the respondents encountered some type of risk when working on the Internet.

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
No	475	19.2	155	23.8	320	17.5
Yes	2000	80.8	495	76.2	1505	82.5
Total	2475	100.0	650	100.0	1825	100.0

Table 95: Encounter with immediate danger when working on the Internet in the entire sample, broken down by gender

The main types of risk when working or having fun on the Internet were unsolicited e-mail messages—spam (83.6% in the entire sample, 82.3% of males, 84.1% of females), infection by viruses, worms or Trojans (79.0% in the entire sample, 80.8% of males, 78.4% of females), offer of downloading pirated software (cracks, license data generators, patched applications, programs with "infinite" time of use without the need for entering license data)—33.3% of the entire sample, 49.2% of males and 27.7% of females, with a statistically significant difference between the genders, $p < 0.001$, χ^2. The issue of elicitation of sensitive data is next (personal data, passwords, bank identifiers, the so-called phishing)—25.7% in the entire sample, 35.4% of males, 22.2% of females, $p < 0.001$. The risk of gambling and betting is also worth mentioning, especially among men (18.2% in the entire sample, 35.4% of males, 12.1% of females, $p < 0.001$, χ^2), presentations of racism and xenophobia (13.5% of the entire sample, 23.1%, of males, 10.1% of females, $p < 0.001$, χ^2). Other risks were encountered less frequently. Pedophile-oriented content was encountered on the Internet by 3.4% of the population (10.0% of males and 1.1% of female, $p < 0.001$, χ^2), glorification of drug use and drug subculture by 6.3% of the sample (11.5% of males and 4.4% of females; $p < 0.001$, χ^2), suicidal instructions by 7.3% (8.5% of males, 6.8% of females), promotion of terrorism and how to manuals for manufacture of devices which may be misused for this purpose by 2.8% of the sample (7.7% of males and 1.1% of females, $p < 0.001$, χ^2), bullying, profanity and insults by 7.7% of the sample (13.1% of males and 5.8% of females; $p < 0.001$, χ^2), and stalking by 3.4% of the sample (4.9% of males and 2.2% of females; $p < 0.001$, χ^2).

When broken down by faculty, computer viruses and other malicious programs were most often encountered by students of the Faculty of Computer Science (90%), the same applies to unsolicited e-mail—spam (100%) and online gambling (40%). Attempts to elicit sensitive data from users was encountered by two-thirds of the students of the Faculty of Social Studies, half of the sample from the Faculty of Law and the Faculty of Computer science. For respondents from other faculties were also recorded high relative frequency of encounters with computer infections and unwanted e-mails. On pedophile-oriented materials most commonly encountered students of the Faculty of Law, Sports Studies and Philosophy (frequency 5–10%). The glorification of the drug subculture and substance abuse often seen especially students of the Faculty of Arts, Science, Science and Sports Studies (12–20%). Websites containing racist and xenophobic oriented materials were

encountered by a third of the users of the Faculty of Arts and Science and by a quarter of the Faculty of Law students. Sites with content that provide advice and guidance to suicidal behavior were mostly encountered by users of the Faculty of Arts and the Faculty of Social Studies (17%). Pirated software and related risks were mostly encountered by students of the faculties of Computer Science, Law, arts and Science (41–70%). This issue was mentioned by respondents from all faculties, but with a lower frequency (18–33%). Pages with the instructions for improvised explosive devices and content propagating the ideas of terrorism were mentioned with a significantly lower rate, but particularly by students of the faculties of Computer Science, arts and Sports Studies (7–10%). Bullying and insults on the Internet were mentioned mainly by students of the Faculty of Computer Science, Arts and Science (12–30%). Activities with elements of persecution and stalking were mostly experienced by students from the Faculty of Social Studies and Arts (10–17%).

Group	**All**		**Men**		**Women**	
Answer	abs.	%	abs.	%	abs.	%
Viruses, worms, Trojans	1955	79.0	525	80.8	1430	78.4
Unsolicited e-mails	2070	83.6	535	82.3	1535	84.1
Elicitation of sensitive data	635	25.7	230	35.4	405	22.2
Gambling and betting	450	18.2	230	35.4	220	12.1
Presentation of pedophilia	85	3.4	65	10.0	20	1.1
Glorification of drugs	155	6.3	75	11.5	80	4.4
Racism, xenophobia	335	13.5	150	23.1	185	10.1
Suicide instructions	180	7.3	55	8.5	125	6.8
Pirated software	825	33.3	320	49.2	505	27.7
Promotion of terrorism	70	2.8	50	7.7	20	1.1
Bullying, insults	190	7.7	85	13.1	105	5.8
Persecution, stalking	85	3.4	45	6.9	40	2.2

Table 96: Types of risks that users encountered on the Internet in the entire sample, broken down by gender (only positive responses)

3.2.6 Bets

In the entire sample, 44.0% of the respondents tried betting. Broken down by gender, 64.6% were males and 36.7% were females ($p < 0.001$, χ^2). Positive responses broken down by faculties ranged from 33 to 67% (least by students of the Faculty of Social Studies, most by students from the Faculty of Economics and Administration and Sports Studies).

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
No	1385	56.0	230	35.4	1155	63.3
Yes	1090	44.0	420	64.6	670	36.7
Total	2475	100.0	650	100.0	1825	100.0

Table 97: Previous betting in the entire sample, broken down by gender

In the entire sample, the first bet mostly took place between 15 to 18 years of age (20.2%), followed by "over 18" (15.7%), "10–14" (6.9%) and "under 10" (1.2%). 56.0 % of the sample either never bet or did not respond. Broken down by gender, men bet for the first time mostly aged 15–18 (36.2%) and women aged over 18 (16.4%). Statistically significant differences between the answers of men and women at the level of 0.1% (χ^2) were observed in the categories of "10–14" and "15–18". According to data from individual faculties, the first bet most often took place in age groups "15–18" and "over 18".

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
Under 10 years old	30	1.2	10	1.5	20	1.1
10-14 years old	170	6.9	85	13.1	85	4.7
15-48 years old	500	20.2	235	36.2	265	14.5
Over 18 years	390	15.7	90	13.8	300	16.4
Never bet + did not respond	1385	56.0	230	35.4	1155	63.3
Total	2475	100.0	650	100.0	1825	100.0

Table 98: Age when the respondents placed their first bet in the entire sample, broken down by gender

During the last six months prior to the study, the highest frequency of bets in the entire sample was 1–3 times (12.1%), with a declining trend followed by "4–10 times" (2.6%) and "more than 10 times" (2.4%). Almost 83% either did not bet in the last six months or did not respond the question. Broken down by gender, like the first category above, "1–3 time" ranks first (19.2% of males, 9.6% of females). Among men, the second option is "more than 10 times" (8.5%) and "4–10 times" (4.6%), while the ranking among women is reversed (1.9% and 0.3%). Frequencies of all categories of bets between genders were statistically significantly different at the level of 0.1% (χ^2). In the last six months, the highest frequency of bets broken down by faculties was 1–3 times (lowest, 3.5%, among the students from the Faculty of Arts, 10 to 22% among the remaining respondents). Higher frequencies betting (more than 10-times) were observed among the students of the faculties of Economics and Administration, Law, and Sports (7–17%).

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
Under 10 years old	300	12.1	125	19.2	175	9.6
10–14 years old	65	2.6	30	4.6	35	1.9
15–48 years old	60	2.4	55	8.5	5	0.3
Over 18 years	2050	82.9	440	67.7	1610	88.2
Never bet + did not respond	2475	100.0	650	100.0	1825	100.0

Table 99: Frequency of betting in previous six months in the entire sample, broken down by gender

In the last month prior to the survey, incidence of betting in the entire sample was 6.1% for "1–3 times". Other categories were represented with the relative frequency of around 1%, 92.1% either did not bet or did not respond the question. Men bet in the last month most often 1–3 times (12.3%), 3.1% "4–10 times" and 3.8% "more than 10 times". 3.8% of women reported "1–3 times". Frequencies of all categories of bets between genders were statistically significantly different at the level of 0.1% (χ^2). Broken down by faculty, the frequency of betting in the last month was mostly 1–3 times, especially by students of the faculties of Law, Science and Sports Studies, the incidence ranged between 10–16%. Frequent episodes of betting occurred among students of the Faculty of Economics and Administration (17% in the category of "more than 10 times").

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
1–3 times	150	6.1	80	12.3	70	3.8
4–10 times	20	0.8	20	3.1	0	0.0
More than 10 times	25	1.0	25	3.8	0	0.0
Never bet + did not respond	2280	92.1	525	80.8	1755	96.2
Total	2475	100.0	650	100.0	1825	100.0

Table 100: Frequency of betting in the last month in the entire sample, broken down by gender

In the last week, 2.8% of the entire sample placed a 1–3 times, 0.2% 4–10 times and 0.4% more than 10 times. 96.6% of the respondents either never bet or did not respond the question. A similar trend is apparent in men, but with higher relative frequencies (8.5%, 0.8% and 1.5%). Women placed a bet 1–3 times with a relative frequency of 0.8%. The frequencies in all categories of bets between genders were statistically significantly different at a level of 1% or better (χ^2). Broken down by faculty, 1–3 betting attempts in the last week were admitted mainly by students of the faculties of Computer Science, Law, and Sports Studies (6–10% of the sample). Higher betting frequency occurred in the students of the Faculty of Economics and Administration (17% in the category of "more than 10 times").

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
1–3 times	70	2.8	55	8.5	15	0.8
4–10 times	5	0.2	5	0.8	0	0.0
More than 10 times	10	0.4	10	1.5	0	0.0
Never bet + did not respond	2390	96.6	580	89.2	1810	99.2
Total	2475	100.0	650	100.0	1825	100.0

Table 101: Frequency of betting in the last week in the entire sample, broken down by gender

25.9% of the bets in the entire sample were aimed at numerical lotteries and 18.6% at tips on sports scores. Among men, bets on sporting events clearly dominated (45.4%) over the numeric lotteries (20.0%), among women it was just the opposite (9.0% for sports betting, 27.9% numeric lotteries). Differences in focus of bets by gender were significantly different ($p < 0.001$ for numerical lottery and sports tips, χ^2). Broken down by faculty, numeric lotteries are popular among students of the faculties of Economics and Administration, Arts, medicine, Education and Science, among students of the Faculty of Social Studies, the proportion of betting on sports results is identical. Betting on sports is dominant among students of the faculties of Computer Science, Law and Sports.

3.2.7 Eating disorders

6.5% of the respondents previously suffered from anorexia nervosa, virtually only women (8.8%, $p < 0.001$, χ^2). Apart from the faculties of Computer Science, Law, Science and Sports Studies, anorexia occurred in the sample of people from other faculties with a frequency of 5–34% (the lowest at the Faculty of Education, the highest at the Faculty of Economics and Administration). Professional help due to anorexia nervosa was sought by 1.2% of the entire sample. Again, this was only women (1.6%, $p < 0.01$, χ^2). Broken down by faculty, the respondents were from the faculty of the Faculty of Medicine, Faculty of Arts and Faculty of Education.

Bulimia nervosa occurred in 4.4% of the respondents, virtually it was only women (6.0%, $p < 0.001$, χ^2). Apart from to the faculties of Computer Science, Science and Social Studies, bulimia was reported people from other faculties with a frequency of 1–34% (the lowest at the Faculty of Sports Studies, the highest at the Faculty of Economics and Administration). Professional help due to bulimia was sought by 2.0% of the entire sample. Again, this was only women (2.7%, $p < 0.001$, χ^2). Broken down by faculty, the respondents were from the Faculty of Economics and Administration, Arts, Medical and Education.

3.2.8 Borrowing money to gamble/bet

Because of gambling/betting, 2.4% of the respondents were ever forced to borrow money, 5.4% of males and 1.4% of females ($p < 0.001$, χ^2). Apart from respondents from the Faculty of Economics and Administration, Social Studies and Sports Studies, others have previously borrowed money because of gambling/betting. Most often, the respondents borrowed

for gambling/betting 1–3 times (1.6%), followed by "more than 10 times" (0.6%) and "4–10 times" (0.2%). Similar relative trends can be observed in men (3.1%, 2.3% and 0.0%) in women, relative frequency has downward trend with increasing frequency of borrowing (1.1%, 0.3% and 0.0%). The difference between the responses by gender is statistically significant at the level of 0.1% (χ^2), with the exception of the category of "4–10 times".

Broken down by faculty, 1–3 loans were the most frequent, most among students from the Faculty of Science, fewer among students from the faculties of Medicine and Education, with a frequency of up to 10%. Higher frequency of loans (4–10 times) was observed in some of the respondents from the Faculty of Science and Faculty of Education.

Group	**All**		**Men**		**Women**	
Answer	abs.	%	abs.	%	abs.	%
1–3 times	40	1.6	20	3.1	20	1.1
4–10 times	5	0.2	0	0.0	5	0.3
More than 10 times	15	0.6	15	2.3	0	0.0
Never borrowed money + did not respond	2415	97.6	615	94.6	1800	98.6
Total	2475	100.0	650	100.0	1825	100.0

Table 102: Frequency of borrowing due to gambling/betting in the entire sample, broken down by gender

2.0% of the respondents always or almost always managed to repay the debt due to the gambling/betting on time, 0.4% had trouble repaying, 97.6% of the sample never borrowed money or did not provide the required information. Those who repaid the debt on time and mostly on time were 4.6% male and 1.1% female ($p < 0.001$, χ^2). 0.8% for males and 0.3% of females had problems with debt payment. Broken down by faculty, almost all respondents were able to repay their debts on time, minor problems occurred among students from the faculties of Education and Science.

3.2.9 Internet banking

70.7% of the sample used Internet banking services, 67.7% were male, 71.8% were female ($p < 0.05$, χ^2). Broken down by faculty, internet banking services were used by 67 to 100% of the respondents.

Internet banking is most frequently used several times a month (43.8% of the sample), followed by "several times a year" (22.2%), approximately a third does not use this type of banking or did not provide the information. Internet banking sorted by gender has similar character, with 44.6% of males and 43.6% of females using it several times a month, 19.2% of males and 23.3% of females several times a year ($p < 0.05$; χ^2). Broken down by faculty, the respondents most frequently used internet banking services several times a year (35–83%, the lowest at the Faculty of Sports Studies, the highest at the Faculty of Social Studies). Once a year and less frequently, these services are used by 10–33% of the respondents (with the lowest frequency at the Faculty of Science, the highest at the faculties of Economics and Administration and Sports Studies). Students of some faculties

(Faculty of Education and Faculty of Sports Studies) reported using internet banking a several times a month (about 1% of the respondents).

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
Once a year or less	95	3.8	20	3.1	75	4.1
Several times a year	550	22.2	125	19.2	425	23.3
Several times a month	1085	43.8	290	44.6	795	43.6
Several times a day	20	0.8	5	0.8	15	0.8
They do not use it + did not respond	725	29.4	210	32.3	515	28.2
Total	2475	100.0	650	100.0	1825	100.0

Table 103: Frequency of use of internet banking services in the entire sample, broken down by gender

3.2.10 Purchasing of expensive consumer goods

About a third of the entire sample (27.7%, 26.2% of males and 28.2% of females) have ever bought expensive consumer goods that were not necessarily needed. Broken down by faculty, one tenth of the students acquired expensive consumer goods that they did not necessarily need (at the Faculty of Computer science and Science) up to one third of the sample (Faculty of Economics and Administration, Faculty of Arts, Faculty of Medicine, legal and Faculty of Sports Studies).

In the overall sample, 3.0% of the respondents have taken a loan to buy expensive consumer goods that were not necessarily needed. 3.8% were male, 2.7% were female. Apart from respondents from the Faculty of Science and the Faculty of Social Studies, respondents from other faculties borrowed money to buy consumer goods—most from the Faculty of Economics and Administration (17%) and the Faculty of Science (10%).

Approximately 5% of the entire sample managed to repay financial loans to purchase more expensive consumer goods on time, virtually everyone who took out a loan. The relative frequency of early repayment of loans among men was 5.4%, among women 4.9%. Some discrepancy with the previous item shows that, in fact, a loan was taken by more respondents (i.e. 5.1%), compared to 3.0% of mentioned above. The higher relative frequency may be due to some reluctance or embarrassment of the respondents to admit to borrowing money. Repayment of debt taken in order to purchase expensive consumer goods was always on time when broken down by faculty.

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
Borrowed money	2350	94.9	615	94.6	1735	95.1
Defaulted	0	0.0	0	0.0	0	0.0
Repaid on time	125	5.1	35	5.4	90	4.9
Total	2475	100.0	650	100.0	1825	100.0

Table 104: Early repayment of loan to purchase expensive consumer goods that the respondent did not necessarily need, in the entire sample, broken down by gender

3.2.11 Person who introduced the respondent to playing slot machines, computers or betting

The predominant factor in the entire sample was the influence of random acquaintances (43.2%) and friends (16.4%), other incentives were represented at a lower frequency (8.5% parents, 8.5% siblings, 5.5% partner, 4.6% other). In the "other" category, most frequent answers were: by myself, relatives, children, classmates, influence of betting sites. Key factor for men were casual acquaintances (61.5%), parents or friends in one tenth of cases. Among women, random acquaintances prevailed again (36.7%), friends (18.6%) and siblings (11.5%). Significant differences ($p < 0.001$, χ^2) between the responses of men and women were apparent in the categories of "siblings", "friends" and "casual acquaintances". Broken down by faculty, the dominant influence on students were casual acquaintances (32–70%) and friends (12–50%). The influence of parents is also noteworthy (especially in the sample from the faculties of Arts, Science, Social Studies and Sports Studies, the frequency is 11 to 21%), as well as of siblings (students of the faculties of Arts, Science, Social Studies and Education, the frequency is 10 to 17%). The most frequent influence of the partner was reported at the Faculty of Computer Science (10%).

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
Parents	210	8.5	65	10.0	145	7.9
Siblings	210	8.5	0	0.0	210	11.5
Partner	135	5.5	45	6.9	90	4.9
Friends	405	16.4	65	10.0	340	18.6
Casual acquaintances	1070	43.2	400	61.5	670	36.7
Other person (stimulus)	115	4.6	35	5.4	95	5.2

Table 105: Person who introduced the respondent to playing slot machines, computers or betting in the entire sample, broken down by gender (only positive responses)

3.2.12 Reasons that led the respondent to playing slot machines, computers or betting

Every reason was evaluated on a scale of 1–5, where a higher "grade" meant declining importance.

Recognition is deemed an important reason by a half of the sample, 37.7% of men and 55.0% of women, $p < 0.001$, χ^2. Respondents from the Faculty of Economics and Administration most frequently chose 1 and 4, from other faculties 1 and 5.

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
1	1205	48.7	230	35.4	975	53.4
2	45	1.8	15	2.3	30	1.6
3	40	1.6	20	3.1	20	1.1
4	160	6.5	75	11.5	85	4.7
5	1025	41.4	310	47.7	715	39.2
Total	2475	100.0	650	100.0	1825	100.0

Table 106: Gambling and betting: recognition of others as a reason, situation in the entire sample, broken down by gender

Sociability is considered an important reason by a half of the sample, 40.0% of men, 54.8% of women, $p < 0.001$, χ^2. Respondents from the Faculty of Economics and Administration and the Faculty of Social Studies most frequently chose 1, 3 and 4, from other faculties 1 and 5.

Group	All		Men		Women	
Answer	1225	49.5	255	39.2	970	53.2
1	55	2.2	20	3.1	35	1.9
2	225	9.1	115	17.7	110	6.0
3	230	9.3	90	10.8	160	8.8
4	740	29.9	190	29.2	550	30.1
5	2475	100.0	650	100.0	1825	100.0
Total	1225	49.5	255	39.2	970	53.2

Table 107: Gambling and betting: sociability as a reason, situation in the entire sample, broken down by gender

Conformism is considered an important reason by more than a half of the sample (51.7%), 42.3% of men and 55.1% of women, $p < 0.001$, χ^2. Respondents from the Faculty of Economics and Administration reviews most frequently voted 1 and 4, from the Faculty of Computer Science 1, 2 and 5, and from other faculties 1 and 5.

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
1	1225	49.5	255	39.2	970	53.2
2	55	2.2	20	3.1	35	1.9
3	225	9.1	115	17.7	110	6.0
4	230	9.3	90	10.8	160	8.8
5	740	29.9	190	29.2	550	30.1
Total	2475	100.0	650	100.0	1825	100.0

Table 108: Gambling and betting: group acceptance, conformity as a reason, situation in the entire sample, broken down by gender

Induction of pleasant feelings is considered an important reason by 65.2% of the sample, 66.1% of men and 64.9% women ($p < 0.001$, χ^2 with separate evaluation by grades 1 and 2). Respondents from the Faculty of Economics and Administration most frequently voted 1 and 2, from the Faculty of Computer Science, Science and Social Studies 1 and 3, from other faculties 1 and 5.

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
1	1360	54.9	320	49.2	1040	57.0
2	255	10.3	110	16.9	145	7.9
3	285	11.5	85	13.1	200	11.0
4	135	5.5	50	7.7	85	4.7
5	440	17.8	85	13.1	355	19.4
Total	2475	100.0	650	100.0	1825	100.0

Table 109: Gambling and betting: induction of pleasant feelings as a reason, situation in the entire sample, broken down by gender

Curiosity is deemed an important reason by 78.4% of the sample, 73.2% of men and 80.6% of women ($p < 0.001$, χ^2). Respondents from the Faculty of Economics and Administration, Education, Law and Science most frequently chose 1-3, from the Faculty of Arts and Faculty of Medicine 1 and 3, from the Faculty of Computer Science and the Faculty of Social Studies 1, 2 and 4, and from the Faculty of Sports Studies 1, 2 and 5.

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
1	1590	64.3	365	56.1	1225	67.2
2	350	14.1	105	16.2	245	13.4
3	295	11.9	65	10.0	230	12.6
4	55	2.2	40	6.2	15	0.8
5	185	7.5	75	11.5	110	6.0
Total	2475	100.0	650	100.0	1825	100.0

Table 110: Gambling and betting: curiosity as a reason, situation in the entire sample, broken down by gender

Release of psychological stress is considered an important reason by 68.4% of the sample, 60.7% of men and 71.3% of women ($p < 0.001$, χ^2). Respondents from the Faculty of Economics and Administration, Faculty of Arts and Faculty of Social Studies most frequently chose 1 and 2, from the Faculty of Computer Science and Law 1 and 3, from the Faculty of Medicine, Education, Science and Sports Studies 1 and 5.

Group	**All**		**Men**		**Women**	
Answer	abs.	%	abs.	%	abs.	%
1	1480	59.7	335	51.5	1145	62.8
2	215	8.7	60	9.2	155	8.5
3	200	8.1	85	13.1	115	6.3
4	180	7.3	50	7.7	130	7.1
5	400	16.2	120	18.5	280	15.3
Total	2475	100.0	650	100.0	1825	100.0

Table 111: Gambling and betting: release of psychological stress as a reason, situation in the entire sample, broken down by gender

Suppression of unpleasant feelings is considered an important reason by 57.4% of the sample, 48.4% men, 60.5% women ($p < 0.001$, χ^2). Respondents from the Faculty of Economics and Administration most frequently chose 1 and 3, from the Faculty of Computer science 3–5, from other faculties 1 and 5.

Group	**All**		**Men**		**Women**	
Answer	abs.	%	abs.	%	abs.	%
1	1275	51.5	260	40.0	1015	55.6
2	145	5.9	55	8.4	90	4.9
3	205	8.3	65	10.0	140	7.7
4	170	6.9	70	10.8	100	5.5
5	680	27.4	200	30.8	480	26.3
Total	2475	100.0	650	100.0	1825	100.0

Table 112: Gambling and betting: suppression of unpleasant feelings as a reason, situation in the entire sample, broken down by gender

Other reasons are considered important by 67.0% of the sample, 60.8% of men and 69.3% of women ($p < 0.01$, χ^2). This includes mainly artistic, spiritual and sexual motives. Respondents from the Faculty of Economics and Administration frequently chose 1, 2, 4 and 5, from the Faculty of Computer Science 1, 3 and 5, from the Faculty of Social Studies 1, 3 and 4, from other faculties 1 and 5.

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
1	1570	63.4	385	59.3	1185	64.9
2	90	3.6	10	1.5	80	4.4
3	160	6.6	60	9.2	100	5.5
4	75	3.0	10	1.5	65	3.6
5	580	23.4	185	28.5	395	21.6
Total	2475	100.0	650	100.0	1825	100.0

Table 113: Gambling and betting: other reasons, situation in the entire sample, broken down by gender

3.2.13 Very easy and easy availability of various activities and objects associated with gambling, information and communication technologies for the respondent

Very easy and easy availability of quiz machines is reported by 59.9% of the sample, 73.8% of males and 55.1% of females ($p < 0.001$, χ^2). Availability of quiz machines is very easy to easy for half to two-thirds of students from all faculties.

Very easy and easy availability slot machines is reported by 59.2% of the sample, 77.0% of males and 52.9% of females ($p < 0.001$, χ^2). The availability of quiz machines is very easy to easy for 49–70% of students from all faculties.

Very easy and easy availability of video computer/console games is reported by 86.9% of the sample, 94.6% of males and 84.1% of females ($p < 0.001$, χ^2). Availability of video computer/console games very easy to easy for 82–100% of students from all faculties.

Very easy and easy availability of mobile phones or smartphone is reported by 96.8% of the sample, 96.2% of males and 97.0% of females. Availability of a mobile phone or smartphone is very easy to easy for 80–100% of students from all faculties.

Very easy and easy availability of Internet is reported by 95.4% of the sample, 96.2% of males and 95.1% of females. Broken down by faculty, the availability of internet connection is very easy to easy for 90–100% of students from all faculties.

Very easy and easy availability of betting is reported by 61.6% of the sample, 83.1% of males and 53.9% of females ($p < 0.001$, χ^2). Availability of betting is very easy to easy for 50–71% of students from all faculties.

Very easy and easy availability of online banking is reported by 82.6% of the sample, 87.0% of males and 81.1% of females ($p < 0.01$, χ^2). Availability of banking services realized through network access is very easy to easy for 76–100% of students from all faculties.

Group	All (n = 2475)		Men (n = 650)		Women (n = 1825)	
Activities	abs.	%	abs.	%	abs.	%
Playing quiz machines	1485	59.9	480	73.8	1005	55.1
Playing slot machines	1465	59.2	500	77.0	965	52.9
Playing on the computer, console	2150	86.9	615	94.6	1535	84.1
Mobile phone, smartphone	2395	96.8	625	96.2	1770	97.0
Internet connection	2360	95.4	625	96.2	1735	95.1
Betting	1525	61.6	540	83.1	985	53.9
Online banking	2045	82.6	565	87.0	1480	81.1

Table 114: Very easy and easy availability of selected activities and subjects, situation in the entire sample, broken down by gender

Faculty / Activities	ECO (%) n = 30	ART (%) n = 285	IT (%) n = 50	MED (%) n = 365	EDU (%) n = 1100
Playing quiz machines	50.0	54.4	50.0	56.2	62.3
Playing slot machines	50.0	57.9	50.0	49.4	60.0
Playing on the computer, console	100.0	82.4	100.0	82.3	89.1
Mobile phone, smartphone	100.0	92.9	80.0	98.6	97.8
Internet connection	100.0	94.8	90.0	93.1	96.3
Betting	66.6	50.8	60.0	52.1	64.1
Online banking	100.0	75.5	90.0	78.1	84.1
Faculty / Answer	**LAW (%) n = 155**	**SCI (%) n = 85**	**SOC (%) n = 30**	**SPO (%) n = 375**	
Playing quiz machines	64.5	58.8	49.9	62.6	
Playing slot machines	64.5	58.8	49.9	70.0	
Playing on the computer, console	90.4	88.2	83.3	84.0	
Mobile phone, smartphone	96.8	94.1	100.0	97.3	
Internet connection	96.8	94.1	100.0	94.6	
Betting	70.9	64.7	50.0	68.0	
Online banking	93.5	88.2	83.3	80.0	

Table 115: Very easy and easy availability of selected activities and subjects, situation broken down by faculty

3.2.14 Respondents' attitudes towards selected activities of adult persons

65.7% of the sample agree with regular use of mobile devices for more than 1 hour per day, 19.4% disagree, 14.9% do not have any opinion. 66.9% of males and 65.2% of females agree with this activity, 14.6% of males and 21.1% of females disagree ($p < 0.001$, χ^2). Broken down by faculty, 50 to 83% of the sample of students agree with the said activity, with the

exception of the Faculty of Science, with only one third. Disagreement was more strongly expressed among the sample of students of the Faculty of Arts, Faculty of Science and Faculty of Social Studies (a quarter to a third of the respondents).

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
I agree	1625	65.7	435	66.9	1190	65.2
I disagree	480	19.4	95	14.6	385	21.1
I cannot judge	370	14.9	120	18.5	250	13.7
Total	2475	100.0	650	100.0	1825	100.0

Table 116: Regular use of a mobile phone (smartphone) for more than 1 hour per day, situation in the entire sample, broken down by gender

33.9% of the sample agree with regular play on the computer or game console for more than 1 hour per day, 60.2% disagree and 5.9% of the respondents do not know. 59.2% of males and 24.9% of females agree with activity ($p < 0.001$, χ^2), 36.2% of males and 68.8% of females disagree ($p < 0.001$, χ^2). Broken down by faculty, opinions vary, at least half of the students from the Faculty of Economics and Administration, Computer Science and Law agree with the above activity. Disagreement was more strongly expressed among students of the Faculty of Arts, Faculty of Medicine, Education, Science, Social Studies and Sports Studies.

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
I agree	840	33.9	385	59.2	455	24.9
I disagree	1490	60.2	235	36.2	1255	68.8
I cannot judge	145	5.9	30	4.6	115	6.3
Total	2475	100.0	650	100.0	1825	100.0

Table 117: Regular playing on the computer (video game console) for more than one hour a day, situation in the entire sample, broken down by gender

31.7% of the sample agree with experimenting with playing slot machines, 57.0% disagree and 11.3% of the respondents have no opinion. 53.8% of males and 23.8% of females agree with this activity ($p < 0.001$, χ^2), 36.2% of males and 64.4% of females disagree ($p < 0.001$, χ^2). Broken down by faculty, more than 40% of students from the Faculty of Economics and Administration, Faculty of Arts, Faculty of Law and Sports Studies agree with the activity. Disagreement was more strongly expressed among students of the Faculty of Computer Science, Medicine, Education, Science and the Faculty of Social Studies.

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
I agree	785	31.7	350	53.8	435	23.8
I disagree	1410	57.0	235	36.2	1175	64.4
I cannot judge	280	11.3	65	10.0	215	11.8
Total	2475	100.0	650	100.0	1825	100.0

Table 118: Experimenting with slot machine playing, situation in the entire sample, broken down by gender

43.3% of the sample agree with experimenting with betting, 41.8% disagree and 14.9% of the respondents have no opinion. 70.0% of males and 33.7% of females agree with this activity ($p < 0.001$, χ^2), 16.9% of males and 50.7% of females disagree ($p < 0.001$, χ^2). Broken down by faculty, at least half of people from the Faculty of Economics and Administration, Law, Social Studies and Sports Studies agree with above activity. Disagreement was more strongly expressed in the sample of students of the Faculty of Science, while in other cases there was a higher rate of undecided respondents, or almost identical frequency of concordant and discordant responses.

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
I agree	1070	43.3	455	70.0	615	33.7
I disagree	1035	41.8	110	16.9	925	50.7
I cannot judge	370	14.9	85	13.1	285	15.6
Total	2475	100.0	650	100.0	1825	100.0

Table 119: Experimenting with betting, situation in the entire sample, broken down by gender

77.2% of the sample agree with regular surfing the Internet for more than 1 hour per day, 11.3% disagree, 11.5% of the respondents have no opinion. 83.0% of males and 75.1% of females agree with this activity ($p < 0.001$, χ^2), 8.5% of males and 12.3% of females disagree ($p < 0.001$, χ^2). Broken down by faculty, at least three quarters of all representatives agree with the above activity. Disapproval was expressed strongly by about a tenth of students of the Faculty of Arts, Medicine, Education and Sports Studies.

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
I agree	1910	77.2	540	83.0	1370	75.1
I disagree	280	11.3	55	8.5	225	12.3
I cannot judge	285	11.5	55	8.5	230	12.6
Total	2475	100.0	650	100.0	1825	100.0

Table 120: Regular web surfing for more than 1 hour per day, situation in the entire sample, broken down by gender

3.2.15 Respondents' attitudes toward legalization of online gambling

36.0% of the sample strongly disagree with legalization of online gambling, 60.2% of the respondents agree under clearly defined conditions, 1.0% agree wholeheartedly, 2.8% have a different opinion. 24.7% of males and 40.0% of females fundamentally disagree with legalization of online gambling ($p < 0.001$, χ^2), 67.7% of males and 57.5% of females agree under clearly defined conditions ($p < 0.001$, χ^2), 3.8% of males implicitly agree, but no women ($p < 0.001$, χ^2). A different view is held by 3.8% of males and 2.5% of females, the most frequently mentioned options were: "I do not care," "people should be free to do whatever they want", "I do not gamble".

Strong opposition to legalization of online gambling was expressed particularly by representatives of the Faculty of Medicine, Education, Science and the Faculty of Social Studies (29–46%). Absolute majority of the sample of students from all faculties would consent to online gambling of adult people, but under clear and strict conditions. This opinion was most favored by students of the Faculty of Economics and Administration, Computer Science, Law, Science, Social Studies and Sports Studies. One tenth of the sample of students from the Faculty of Computer Science and Law expressed unconditional acceptance of this activity.

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
I strongly disagree	890	36.0	160	24.7	730	40.0
I agree under clear conditions	1490	60.2	440	67.7	1050	57.5
I fully agree	25	1.0	25	3.8	0	0.0
Different opinion	70	2.8	25	3.8	45	2.5
Total	2475	100.0	650	100.0	1825	100.0

Table 121: Attitudes toward legalization of online gambling, situation in the entire sample, broken down by gender

3.2.16 Use of counselling and therapeutic services aimed at pathological addiction during the respondent's life

Consulting services focusing on pathological addiction was used by 1% of the entire sample, only women (1.4%, $p < 0.01$, χ^2). Broken down by faculty, consulting services focused on pathological addiction were used by only 2.3% of the respondents from the Faculty of Education.

Therapeutic services focusing on pathological addiction were used by 0.8% of the entire sample, only women (1.1%, $p < 0.01$, χ^2). Broken down by faculty, therapeutic services aimed at pathological addiction were used mainly by respondents from the Faculty of Economics and Administration (16.7%), to a lesser extent by the students of the Faculty of Medicine (1.4%) and Education (0.9%).

3.2.17 Respondents' views on the importance of including the issue of virtual drugs in teaching of students at MU

The inclusion of the issue of virtual drugs into teaching of students at MU is clearly approved by 34.5% of the sample, 65.5% of the respondents tend to agree. Clear agreement was expressed by 51.5% of males and 28.5% of females ($p < 0.001$, χ^2), 48.5% of males and 71.5% of females rather agree ($p < 0.001$, χ^2). There was no negative feedback. A quarter of the sample of students of the faculty of Faculty of Arts and Faculty of Education, a third of the Faculty of Medicine, Science and the Faculty of Social Studies, half or more of the remaining faculties consider inclusion of virtual drugs into teaching of students at MU as very important. Other respondents expressed a concurring opinion, fairly negative or clearly negative opinion was expressed by none of the respondents.

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
Yes, absolutely	855	34.5	335	51.5	520	28.5
Rather yes	1620	65.5	315	48.5	1305	71.5
Rather not	0	0.0	0	0.0	0	0.0
No	0	0.0	0	0.0	0	0.0
Total	2475	100.0	650	100.0	1825	100.0

Table 122: Opinions of the respondents regarding the importance of the inclusion of problematic virtual drugs in teaching of students at MU, situation in the entire sample, broken down by gender

3.2.18 Opinions of the respondents to the question whether MU pays sufficient attention to the issue of virtual drugs

In the opinion of 86.9% of the respondents, MU clearly pays sufficient attention to the issue of virtual drugs, 13.1% of the respondents tend to agree with this view, nobody voiced disapproval. Unambiguous consent was expressed by 83.1% of males and 88.2% of females ($p < 0.001$, χ^2), 16.9% of males and 11.8% of females tend to agree ($p < 0.001$, χ^2). Broken down by faculty, the respondents' answers showed that according to a clearly concurring opinion of 67–98% of students (least from the Faculty of Social Studies, most from the Faculty of Medicine) MU pays sufficient attention to the issue of virtual drugs. The rest of the respondents tended to agree, nobody expressed fairly negative or unambiguously negative opinion on the issue.

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
Yes, absolutely	2150	86.9	540	83.1	1610	88.2
Rather yes	325	13.1	110	16.9	215	11.8
Rather not	0	0.0	0	0.0	0	0.0
No	0	0.0	0	0.0	0	0.0
Total	2475	100.0	650	100.0	1825	100.0

Table 123: Opinions of the respondents to the question whether the MU pays sufficient attention to the issue of virtual drugs, situation in the entire sample, broken down by gender

3.3 Mapping of activities and of the level of drug prevention at Masaryk University

3.3.1 Encounters of the respondents with addiction prevention activities at Masaryk University

Only a fifth of the entire sample (22%) encountered primary addiction prevention during their studies at the University, 11% of men and 26% women ($p < 0.001$, χ^2). In evaluating the responses by faculties, considerable variations were observed. Virtually no one mentioned having encountered addiction prevention at the university at the Faculty of Social Science, and Sports, 7% of the respondents at the Faculty of Law, about a tenth at the Faculty of Economics and Administration and at the Faculty of Arts, one fifth at the Faculty Medicine and the Faculty of Science, half at the Faculty of Education and Faculty of Computer Science.

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
No	1696	77.9	528	89.2	1168	73.7
Yes	480	22.1	64	10.8	416	26.3
Total	2176	100.0	592	100.0	1584	100.0

Table 124: Encounters of the respondents with addiction prevention activities at Masaryk University, situation in the entire sample, broken down by gender

Virtually all respondents have encountered some form of addiction prevention in high school. Teachers talked about the prevention of addiction with more than 90% of the respondents, of which with two-thirds rather exceptionally, with one third repeatedly. Less frequent communication about drugs was reported more frequently by men, more frequently by women. Repeated talks about dependency in high school have been found in more than one third of the respondents from the Faculty of Education, Faculty of Medicine, Faculty of Arts, Social Studies and Sports Studies.

3.3.2 Options of the respondents in encountering addiction prevention at Masaryk University

Overview of positive responses in the entire sample shows that one fifth of the sample of full-time students encountered addiction prevention at the University in classes, 8% of males and 24% of females ($p < 0.001$, χ^2). Preventive activities at dormitories were noticed by barely 2% of the sample, slightly more women, less than 1% of the entire sample within educational events organized by the University, practically only men. Other events organized by the Masaryk University were mentioned by less than 2% of the sample, practically only women.

In classes, students encountered addiction prevention most often at the Faculty of Education (48%), Science (19%) and Medicine (18%), also at the Faculty of Computer Science (25%), less frequently at other faculties (Economics and Administration Faculty—11%, Faculty of Arts—12%, Faculty of Law—7%). Preventive events at dormitories were mentioned only sparsely (Faculty of Law and Science), the same applies to other events of educational, artistic and sporting focus organized by the University (mentioned by respondents from the Faculty of Science, Medicine and Faculty of Education).

Group	All (n = 2176)		Men (n = 592)		Women (n = 1584)	
Answer	abs.	%	abs.	%	abs.	%
In teaching	432	19.9	48	8.1	384	24.2
At dorms	32	1.5	16	2.7	16	1.0
At training events organized by MU	16	0.7	16	2.7	0	0.0
On other events organized by MU	32	1.5	0	0.0	32	2.0

Table 125: Chances of the respondents to encounter prevention of addiction at Masaryk University, situation in the entire sample, broken down by gender, positive answers

3.3.3 Types of courses in which the respondents encountered addiction prevention in the context of teaching at Masaryk University

In courses at the University, 80% of the sample never encountered primary prevention of addiction, 92% of males and 76% of females ($p < 0.001$, χ^2). Approximately one tenth of the entire sample of students encountered prevention in the context of compulsory courses (13% of females, 3% less than men, $p < 0.01$, χ^2). Approx. 2% reported contact in compulsory elective courses, it was almost only women ($p < 0.01$, χ^2). More than 8% of the entire sample mentioned elective courses, 5% of men and 9% of women ($p < 0.001$, χ^2).

Most respondents encountered primary addiction prevention within compulsory courses at the Faculty of Education (34%), followed by Faculty of Medicine (9%), Faculty of Law (7%) and Faculty of Arts (6%). Compulsory electives were mentioned only at the the Faculty of Education (7%), electives more frequently (Faculty of Economics and Administration 11%, Arts 6%, Computer Science 25%, Medicine 9%, Education 7%, Science 19%).

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
Compulsory subjects	224	10.3	16	2.7	208	13.1
Compulsory optional subject	32	1.5	0	0.0	32	2.0
Optional subjects	176	8.1	32	5.4	144	9.1
Did not encounter in education	1744	80.1	544	91.9	1200	75.8
Total	2176	100.0	592	100.0	1584	100.0

Table 126: Types of articles in which the respondents encountered prevention of addiction in the context of courses at Masaryk University, situation in the entire sample, broken down by gender

3.3.4 Types of activities which according to the respondents are directly linked to the implementation of drug prevention at Masaryk University

Positive answers of all respondents indicated that 12% of the sample encountered prevention at Masaryk University at lectures (mentioned only by women), almost 4% at lectures with a discussion (without major differences between the genders), less than 1% in discussions with experts (mentioned only by women) and visits to addiction treatment centers (mentioned only by men). Approximately 2% of all respondents participated in after-school prevention programs (more men), less than 1% in various artistic activities (marked only by men).

Most faculties use mainly simple lectures (without feedback), which was reported mostly by students of the faculties of Education and Medicine, less frequently of the faculties of Arts and Science. Lectures with discussion were mentioned by students of the faculties of Education, Law and Science. Other types of activities were chosen sporadically—such as discussions with experts, visits to therapeutic centers, participation in after-school prevention programs, artistic activities.

Group	All (n = 2176)		Men (n = 592)		Women (n = 1584)	
Answer	abs.	%	abs.	%	abs.	%
Simple lecture	256	11.8	0	0.0	256	16.2
Lecture with discussion	80	3.7	32	5.4	48	3.0
Discussion with experts	16	0.7	0	0.0	16	1.0
Discussion with ex-user	0	0.0	0	0.0	0	0.0
Visit to K-center, etc.	0	0.0	0	0.0	0	0.0
Visit to medical facility	16	0.7	16	2.7	0	0.0
School prevention program	0	0.0	0	0.0	0	0.0
Extracurricular prevention program	32	1.5	16	2.7	16	1.0
Artistic activities	16	0.7	16	2.7	0	0.0
Sports activities	0	0.0	0	0.0	0	0.0

Table 127: Types of activities which according to the respondents were directly linked to the implementation of drug prevention at Masaryk University, situation in the entire sample, broken down by gender, positive answers

In evaluating the positive responses of the respondents focused on the types of prevention activities in high schools it showed that a simple lecture without subsequent feedback was encountered by more than a third (38%) of the entire sample, more women. Lecture with discussion was indicated by two-thirds (62%) of respondents, women more often again. Discussions with experts was chosen by more than a half of the sample (54%), more men, discussions with former drug users were mentioned by half of the respondents, similarly also visits to prevention centers for addiction related issues. Only 2% (only women) reported visiting an addiction treatment facility, 6% mentioned having participated in a school prevention program (women more often), 4% participated in an after-school prevention program, 8% participated in arts and in 10% in sporting activities, there were considerably more men).

Broken down by faculty, the highest relative frequency was observed in secondary prevention activities through lectures with feedback (half to three quarters) and discussions with experts (one-third to three-quarters). In school or extracurricular activities of primary addiction prevention in high school were the most engaged respondents who studied at the Faculty of Arts, Computer Science, Education, Law, Science and the Faculty of Social Studies.

3.3.5 Types of addiction which preventive activities at MU concerned

Most often frequent response (84% in the entire sample, 89% of males, 82% of females, $p < 0.001$, χ^2) was that prevention activities at the University concerned only the issue of alcohol and tobacco, abused substances whose purchase and consumption is legal since 18 years of age. Prevention of addictions on banned substances was mentioned by almost 2% of the respondents (2.7% of males and 1.0% of females, $p < 0.01$, χ^2), none reported prevention of addictions on the so-called virtual drugs. Comprehensive university organized prevention (addiction to alcohol, tobacco and illicit drugs) was mentioned by more than 5% of the respondents, with no significant differences between men and women. Approximately one tenth of the respondents (almost 3% of males and more than 12% of females, $p < 0.001$, χ^2) said that prevention at the University focused on all types of addictions, i.e. substances, virtual drugs and other kinds of addictive behavior.

In the opinion of the majority of the respondents from various faculties preventive activities at the University relate particularly to alcohol and tobacco, less frequently to other addictive substances and activities. Students of the Faculty of Education (52%), Computer Science (25%), Law (13%), Medicine (9%) and Arts (3%) consider the prevention to be more complex.

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
Only legal drugs	1824	83.8	528	89.2	1296	81.8
Only illegal drugs	32	1.5	16	2.7	16	1.0
Only virtual drugs	0	0.0	0	0.0	0	0.0
Legal and illegal drugs	112	5.1	32	5.4	80	5.1
All types of addiction	208	9.6	16	2.7	192	12.1
Total	2176	100.0	592	100.0	1584	100.0

Table 128: Types of addiction related to preventive activities at MU, situation in the entire group, broken down by gender

As regards the situation in high school, approximately 8% of the respondents (16% men, 5% women, $p < 0.001$, χ^2) said that their experience with secondary prevention related only to the issue of alcohol and tobacco (legal drugs), one fifth (21%) encountered only prevention of illicit substances in high school. Around 2% of the sample (only women) were affected only by prevention of addiction to virtual drugs.

Comprehensive application of primary prevention (alcohol, tobacco, illegal substances) in high school was noted by more than a half of the entire sample (56%), 58% of women compared to 51% of men ($p < 0.05$, χ^2). Prevention of all types of addictions indiscriminately applied to only 14% of the respondents, 15% of females and 11% of males ($p < 0.05$, χ^2). The respondents' answers broken down by faculty showed major differences. 25–90% of the sample encountered a complex concept of prevention of dependency in high school.

3.3.6 Systematic nature of university prevention activities

Only about 3% of the entire sample considered university preventive activities as systematic (practically only women, no man, $p < 0.001$, χ^2). The rest is of the opinion that the efforts are sporadic. Only respondents from the Faculty of Education (14%) stated that they encountered systematic prevention activities ate the University.

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
Isolated	2112	97.1	592	100.0	1520	96.0
Systematic	64	2.9	0	0.0	64	4.0
In total	2176	100.0	592	100.0	1584	100.0

Table 129: Systematic nature of prevention activities at the university, in the entire sample and broken down by gender

Highs school activities of primary prevention of addiction were according to 82% of the respondents only sporadic, according to 18% systematic. Compared to men, women considered high school prevention more systematic. Relative responses broken down by faculty oscillated around the statement that high school prevention was only one-time,

by two-thirds to nine-tenths of the sample. The remainder of the respondents considered it systematic.

3.3.7 Mentions of the issue of prevention of eating disorders (anorexia nervosa and bulimia nervosa) in prevention at Masaryk University

According to the responses of more than one tenth of the respondents (almost only women, $p < 0.001$, χ^2) the issue of eating disorders (anorexia nervosa and bulimia nervosa) were mentioned at the university level. Respondents at the Faculty of Arts (6%), Faculty of Medicine (18%) and Education (38%) came into contact with the issue.

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
No	1936	89.0	592	100.0	1344	84.8
Yes	240	11.0	0	0.0	240	15.2
In total	2176	100.0	592	100.0	1584	100.0

Table 130: Mentions on prevention of eating disorders within prevention programs at Masaryk University, situation in the entire group, broken down by gender

According to answers of 41% of the entire sample, the issue of eating disorders (anorexia nervosa and bulimia nervosa) was mentioned at high school level. There was a significant difference in favor of women between the answers of men and women. 25% to 57% of students from various faculties answered this item positively (least at the Faculty of Computer Science, most at the Faculty of Science).

3.3.8 Assessment of the level of prevention at Masaryk University

Almost 56% of the entire sample (no significant differences between the sexes) consider the university addiction prevention as targeted and useful. Around 4 % of all respondents assess prevention at the University as untargeted, but still useful, more women (no significance). A third of the sample has no strong opinion. More than 7% of all respondents (2.7% of males and 9.1% of females, $p < 0.001$, χ^2) criticizes the fact that prevention was unclearly focused and almost of no use, more than 2% of all respondents (5.4% of males and 1.0% of females; $p < 0.001$, χ^2) describe it as complete waste of time.

Approximately half of the respondents from various faculties at the University consider the prevention as targeted and useful, but there is a relatively high percentage of people who cannot take a position, the do not have an opinion. Generally, students of the Faculty of Arts (3%), Faculty of Medicine (18%), Education (17%) and Science (10%) complained of low usefulness and lack of focus of the prevention. Some students of the Faculty of Law (7%) and the Faculty of Science (10%) even evaluate prevention at the University as a complete waste of time.

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
Targeted and useful	1216	55.9	320	54.1	896	56.6
Untargeted, but still useful	80	3.7	16	2.7	64	4.0
I cannot judge	672	30.9	208	35.1	464	29.3
Vaguely focused and almost useless	160	7.4	16	2.7	144	9.1
Totally wasted time	48	2.1	32	5.4	16	1.0
In total	2176	100.0	592	100.0	1584	100.0

Table 131: Evaluation of the level of prevention at Masaryk University in the entire sample, broken down by gender

Faculty / **Answer**	**ECO (%)** n = 144	**ART (%)** n = 512	**IT (%)** n = 64	**MED (%)** n = 176	**EDU (%)** n = 464
Targeted and useful	66.7	68.8	0.0	45.5	48.4
Untargeted, but still useful	0.0	3.1	0.0	0.0	10.3
I cannot judge	33.3	25.0	100.0	36.4	24.1
Vaguely focused and almost useless	0.0	3.1	0.0	18.1	17.2
Totally wasted time	0.0	0.0	0.0	0.0	0.0
In total	100.0	100.0	100.0	100.0	100.0

Faculty / **Answer**	**LAW (%)** n = 240	**SCI (%)** n = 336	**SOC (%)** n = 208	**SPO (%)** n = 32
Targeted and useful	40.0	52.4	84.6	50.0
Untargeted, but still useful	6.7	0.0	0.0	0.0
I cannot judge	46.6	28.6	15.4	50.0
Vaguely focused and almost useless	0.0	9.5	0.0	0.0
Totally wasted time	6.7	9.5	0.0	0.0
In total	100.0	100.0	100.0	100.0

Table 132: Evaluation of the level of prevention at Masaryk University, broken down by faculty

By comparison with high school prevention, a fifth of the entire sample (21%) and women (19%) considered prevention of addiction as targeted and useful, the same answer was provided by a quarter of men (24%). Among the reactions of men and women there was a statistically significant difference ($p < 0.05$, χ^2). Approximately 15% of all respondents assessed prevention in high school as untargeted, but still useful, without major fluctuations in frequency between the sexes (14–16%). More than a quarter of the sample (27%) and 29% of females have no strong opinion of the level of secondary prevention, 22% of men ($p < 0.001$, χ^2). A third of the respondents, 30% of females and 38% of males ($p < 0.001$, χ^2) criticized the fact that the prevention had no clear focus and was almost useless, more than 4% of the respondents described it as a complete waste of time, men are less aversive ($p < 0.05$, χ^2).

In evaluating the responses by individual faculties, prevention in high school was considered targeted and useful by a tenth to one-third of the respondents (least at the Faculty of Economics and Administration, most at the Faculty of Medicine and the Faculty of Education), further stratification of subjective evaluation varies significantly. Prevention in high school was assessed as a complete waste of time by 6% of the respondents at the Faculty of Arts, 7% at the Faculty of Education and 10% at the Faculty of Science.

3.3.9 Respondents' view concerning adequacy of time devoted to primary prevention of addictions at Masaryk University

Nearly 92% of the respondents thought that primary prevention of addictions at the University is not devoted adequate time. Women are more critical than men ($p < 0.001$, χ^2). Aside from the view of small samples at the Faculty of Computer Science and Sports Studies, the respondents generally believed that primary prevention of addiction is not devoted enough time during their university studies.

Group	**All**		**Men**		**Women**	
Answer	abs.	%	abs.	%	abs.	%
Not enough time	2000	91.9	512	86.5	1488	93.9
Enough time	176	8.1	80	13.5	96	6.1
Total	2176	100.0	592	100.0	1584	100.0

Table 133: Respondents' views concerning adequacy of time devoted to primary prevention of addictions at Masaryk University, situation in the entire group, broken down by gender

Faculty / **Answer**	**ECO (%)** n = 144	**ART (%)** n = 512	**IT (%)** n = 64	**MED (%)** n = 176	**EDU (%)** n = 464
Not enough time	100.0	93.8	25.0	100.0	93.1
Enough time	0.0	6.2	75.0	0.0	6.9
Total	100.0	100.0	100.0	100.0	100.0
Faculty / **Answer**	**LAW (%)** n = 240	**SCI (%)** n = 336	**SOC (%)** n = 208	**SPO (%)** n = 32	
Not enough time	93.3	85.7	100.0	100.0	
Enough time	6.7	14.3	0.0	0.0	
Total	100.0	100.0	100.0	100.0	

Table 134: Respondents' views concerning adequacy of time devoted to primary prevention of addictions at Masaryk University, broken down by faculty

3.3.10 Respondents' opinions concerning sufficient variety of activities in primary prevention of addictions on offer at Masaryk University

We noted a similar assessment as in the previous item. More than 90% of the respondents consider the activities in primary prevention of addictions on offer at the University as not sufficiently diverse. Women are again more critical than men ($p<0.001$, χ^2).

Broken down by faculties we come to similar conclusions as in the previous case.

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
Insufficiently diverse	1968	90.4	496	83.8	1472	92.9
Sufficiently diverse	208	9.6	96	16.2	112	7.1
In total	2176	100.0	592	100.0	1584	100.0

Table 135: Respondents' opinions concerning sufficient variety of activities in primary prevention of addictions on offer at Masaryk University, situation in the entire group, broken down by gender

3.3.11 Types of drug prevention activities that should be enhanced/established according to the respondents at Masaryk University

Analysis of positive responses of students showed that a fifth of the entire sample (on seventh of men and one quarter of women, $p < 0.001$, χ^2) would welcome introduction or increased use of lectures/discussions in classes. Discussion with practitioners would be welcome by half of all respondents (35% of males, 57% of females, $p < 0.001$, χ^2), or debates with former drug users, etc. (43% of males, 55% of females, $p < 0.001$, χ^2). Visits to preventive or therapeutic facilities would be welcome by 46% of the sample (a quarter of men and half of women, $p < 0.001$, χ^2). About a third of the sample (more women) would support and strengthen cooperation of students in preventive projects (grants). A third of the entire sample (a quarter of men and a third of women, $p < 0.05$, χ^2) would strengthen or introduce various preventive activities in university dormitories, a third of all respondents (one fifth of men and one third of women) would provide more support to out-of-dorm events (e.g. educational, artistic, sporting, etc., $p < 0.001$, χ^2).

When analyzing the answers of the respondents from individual faculties, a quarter of the sample from the Faculty of Arts, Computer Science, Medicine, Education and Social Studies and one tenth of the Faculty of Law and Science would welcome more frequent lectures with discussions in classes. Discussions with practitioners would be welcome by a third of the students of the Faculty of Economics and Administration, 40% of the Faculty of Education and Science, two-thirds of the Faculty of Arts, Faculty of Medicine, Faculty of Law and the Faculty of Social Studies. Discussions with former drug users were demanded by 25% of the sample of students of the Faculty of Computer Science, one third of the Faculty of Economics and Administration, and approximately half of the Faculty of Arts, Medicine, Education, Science and Sports Studies, 60% of the Faculty of Law and 85% of the Faculty of Social Studies. Visits to preventive or therapeutic facilities for treatment of pathological addictions would be welcome by one-fifth of the sample of

the Faculty of Economics and Administration, one-third of the Faculty of Law and the Faculty of Science, half of the Faculty of Medicine, Education and Computer Science, 60% of the Faculty of Arts and 40% of the Faculty of Social Studies, and virtually all of the small sample of the respondents from the Faculty of Sports Studies. Cooperation in preventive projects (grants) would be supported by a tenth of the sample of the Faculty of Medicine, a fifth of the Faculty of Economics and Administration, a third of the Faculty of Education, Faculty of Law and Faculty of Science, 40% of the Faculty of Arts, half of the Faculty of Social Studies and the Faculty of Computer Science, and virtually all of the small sample of the faculty Sports Studies. Introducing or enhancing of university events focused on prevention was mentioned by a tenth of the sample of the Faculty of Medicine students, 15% of the Faculty of Social Studies, a quarter of the Faculty of Computer Science, a third of the Faculty of Economics and Administration, Faculty of Arts, Education, Law and Science. Out-of-dorm events are proposed to be established or enhanced by a fifth of the respondents from the Faculty of Education, Medicine and Law, a third from the Faculty of Science and the Faculty of Social Studies, 44% from the Faculty of Economics and Administration, and half from the Faculty of Computer Science.

Group	**All (n = 2176)**		**Men (n = 592)**		**Women (n = 1584)**	
Answer	abs.	%	abs.	%	abs.	%
Lecture and discussion in the classroom	448	20.6	80	13.5	368	23.2
Discussion with experts from practice	1104	50.7	208	35.1	896	56.6
Discussion with ex-user	1120	51.5	256	43.2	864	54.5
Visit to preventive or medical facility	992	45.6	160	27.0	832	52.5
Cooperation in a preventive project/grant	752	34.6	160	27.0	592	37.4
Dormitory event	608	27.9	144	24.3	464	29.3
External event	672	30.9	112	18.9	560	35.4

Table 136: Types of drug prevention activities that should be enhanced/established according to the respondents at Masaryk University, situation in the entire group, broken down by gender, positive answers

3.3.12 Utilization of services the Counselling Center at the Masaryk University Rector's Office during the studies of the respondents

Only 3% of all respondents (4% of females, $p < 0.001$, χ^2) used the services of the Counselling Center of the University. It was only women, of which 2% visited the center once, 2% repeatedly.

The female respondents who reported one-time or repeated visit to the Counselling center were students of the faculties of Arts and Law.

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
No	2112	97.0	592	100.0	1520	96.0
Yes, once	32	1.5	0	0.0	32	2.0
Yes, repeatedly	32	1.5	0	0.0	32	2.0
Total	2176	100.0	592	100.0	1584	100.0

Table 137: Use of services of the Counselling Center at the Masaryk University Rector's Office, situation in the entire group, broken down by gender

A third of all respondents (more than a half of men and a quarter of females, $p < 0.001$, χ^2) would agree to extension of counselling services for students of the University with addiction issues. The remainder of the respondents does not consider this topic important.

Frequency of answers to this question when broken down by faculty varies. Extension of existing counselling services for dealing with drug and addictive behavior issues would be welcome by a tenth of the respondents from Faculty of Medicine, a quarter from the Faculty of Arts, Computer Science and the Faculty of Social Studies, a third from the Faculty of Law, 40% from the Fyulty of Education and the Faculty of Science, a half of the Faculty of Economics and Administration, and of Sports Studies.

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
No	1440	66.2	256	43.2	1184	74.7
Yes	736	33.8	336	56.8	400	25.3
Total	2176	100.0	592	100.0	1584	100.0

Table 138: Consent of the respondents with an expansion of counselling services with counselling on problems with drugs and addictive behavior for Masaryk University students, situation in the entire group, broken down by gender

In the event that respondents needed to use drug counselling they could choose from several options. A third of them (19% of males, 36% of females, $p < 0.001$, χ^2) would identify addiction counselling as the existing Counselling Center of the University, one seventh (8% of males, 16% of females, $p < 0.001$, χ^2) would place counselling in a building of some of the student dormitories at Masaryk University. A quarter of the respondents (19% of males, 27% of females, $p < 0.001$, χ^2) would rather visit consultancy services in a faculty building, a third (54% of males, 20% of females, $p < 0.001$, χ^2) away from the University premises.

Drug counselling would be placed in the premises the existing counselling center mostly by respondents from the Faculty of Medicine, Arts, Social Studies and Computer Science (more than 40%), into a dormitory by more than one fifth of the respondents from the Faculty of Computer Science, Law and Science. Placement of counselling services to a faculty building would be preferred by more than a third of the respondents from the Faculty of Medicine, Education, Law and Sports Studies. More than a third of the respondents from the Faculty of Economics and Administration, Education, Science and Sports Studies would prefer having the counselling center away from the University premises.

Group	All		Men		Women	
Answer	abs.	%	abs.	%	abs.	%
In the existing counselling center	688	31.6	112	18.9	576	36.4
In some MU dormitories	304	14.0	48	8.1	256	16.2
In some MU faculties	544	25.0	112	18.9	432	27.3
Objects outside MU	640	29.4	320	54.1	320	20.1
Total	2176	100.0	592	100.0	1584	100.0

Table 139: Respondents' views on the location of the intended drug-counselling center, situation in the entire group, broken down by gender

Faculty **Answer**	**ECO (%)** n = 144	**ART (%)** n = 512	**IT (%)** n = 64	**MED (%)** n = 176	**EDU (%)** n = 464
In the existing counselling center	11.1	43.7	50.0	45.5	17.2
In some MU dormitories	11.1	12.5	25.0	9.1	10.3
In some MU faculties	22.2	21.9	0.0	36.4	34.5
Objects outside MU	55.6	21.9	25.0	9.1	38.0
Total	100.0	100.0	100.0	100.0	100.0

Faculty **Answer**	**LAW (%)** n = 240	**SCI (%)** n = 336	**SOC (%)** n = 208	**SPO (%)** n = 32
In the existing counselling center	20.0	33.3	46.1	0.0
In some MU dormitories	20.0	23.8	7.7	0.0
In some MU faculties	33.3	9.6	23.1	50.0
Objects outside MU	26.7	33.3	23.1	50.0
Total	100.0	100.0	100.0	100.0

Table 140: Respondents' views on the location of the intended drug-counselling center, broken down by faculty

IV

DISCUSSION

4.1 Addictive substances in selected segments of the sample

According to available literature, there is a variety of descriptive and comparative studies in drug epidemiology focusing on the use of legal and illegal substance drugs (fewer on non-substance drugs) in different sample groups. Relatively best overview is of the situation among young people in primary and secondary schools, which are the most vulnerable groups (e.g. Csémy et al. [online], 2006; Andersson et al. [online], 2007; Csémy et al. [online], 2008; Hibell et al. [online], 2009; CDAS, 2010; Csémy and Chomynová, 2012; Chomynová et al., 2014; Mravčík et al., 2015). There is less systematic focus on University students and they often remain hidden in larger samples—e.g. in the age group 18–35 years (Nešpor et al., 1994; Nešpor and Csémy, 1997; CDAS, 1997; Collective, 1998; Collective, 1998b; Collective, 1998c). Experience of university students with primary addiction prevention and its application in university life in larger samples was rarely analyzed, especially at humanities faculties. Frequent mentions of the administration of prevention in a university environment come from abroad. Czech sources include the works of Csémy et al. (2004) and a meta-analysis of higher education environment realized by Vondráčková et al. (2009) focusing on substance and non-substance addictions and their prevention

4.1.1 Alcohol in Czech Republic

Alcohol is the most commonly used and tolerated highly addictive substance in the Czech Republic, and the sample has the most experience with it. This finding is consistent with the high prevalence of previous experience of university students, which reaches 95% or more. The relative frequency of abstainers varies according to the circumstances between 0–15%, with an average of about 5% (Kachlík and Šimůnek, 1998; Syrovcová et al., 2001). According to the Institute of Health Information and Statistics (ÚZIS/IHIS) there were approximately 10% and 7% of abstainers in the general sample in the age group 18–24 years (ÚZIS, 2006).

Alcohol among university students is the most widely used addictive substance, its consumption causes the most problems. It is often associated with the use of numerous illicit drugs. A typical way of alcohol consumption among university students is referred to as "binge drinking", meaning drinking of large amounts of alcohol in a single drinking episode (Jones et al., 2001; Liu, 2007; Sheffield et al., 2005).

Csémy et al. (2004) studied a sample of 904 university students in Prague (Charles University, University of Economics, Czech Technical University in Prague, Czech University of Agriculture, Institute of Chemical Technology) using an anonymous

structured questionnaire, which focused on drug abuse and attitudes toward them. It also contained scales monitoring selected psychological characteristics. Risky or socially undesirable forms of substance abuse were found in one third of the sample. Excessive alcohol consumption was found in one fifth of men and 8% of women. Relative frequency of regular daily cigarette smokers did not differ by gender (14% of males, 13% of females), use of monitored drugs (marijuana, methamphetamine, heroin, LSD, ecstasy) in the previous year five times or more frequently was admitted by 24% of males and 12% of females. Persons with risky behavior towards addictive substances showed a higher level of depression worse mental health, the found it harder to identify with generally accepted social norms. Students abusing alcohol or consuming other drugs generally advocated for a more conciliatory attitude toward substance abuse. They found no significant association between quality of family environment and drug abuse.

Csémy et al. (2004) also studied the frequency of risky behavior in relation to alcohol. Significant differences were found when the sample was broken down by gender (men's behavior is more risky), but not when broken down by years. Alcohol once a week or more frequently (regular drinking) was admitted by more than a half of the respondents, excessive amounts of alcohol (when converted, equivalent to 100 ml or more of pure ethanol) more than 3 times a month by more than a tenth of the respondents (over 20% of men, over 4% of women). More than 3 episodes of drunkenness in the past year were admitted by 40% of males and 20% of females. Problem drinking in the sample of Prague university students concerned one third of men and one fifth of women.

Záškodná (2004) mapped experience with addictive substances among students of the University of South Bohemia in the České Budějovice. At least one episode of drunkenness in a sample of 116 respondents from the Faculty of health, Social Work and Education was admitted by more than 80%, in the last year by more than 50%, in the last month by 25%.

Similar finding were reported by Syrovcová et al. (2001), who used a questionnaire survey to contact 253 students of the Faculty of Pharmacy in Hradec Králové. Drunkenness in the last month was reported by less than a quarter of the sample, less than a tenth repeatedly. Representation of the sexes in the study of Záškodná (2004) and Syrovcová et al. (2001) is not uniform, women clearly prevailed, so the incidence of drunkenness among men can be hidden (Vondráčková et al., 2009). For comparison with the general sample, ÚZIS (2006) reported at least one episode of drunkenness in the life of 78.2% of the respondents in the age group 18–24 years.

Sovinová et al. ([online], 2014) and Madarasová Gecková et al. (2016) report that beer was drunk regularly (weekly or more often) by 38% of fifteen-year boys and 20% of girls, in the case of spirits it was 13% of boys and 10% of girls. Repeated drunkenness was reported by 46% of fifteen-year boys and 40% of girls. Use of alcoholic beverages among teens has had a slightly increasing tendency in the last ten years, incidence of regular drinking of beer and spirits among boys increased, of wines and spirits among girls. Frequent binge drinking (i.e. consumption of five or more glasses of alcohol three times or more within the last 30 days) in 2011 was reported by 21% of students (27% of boys and 16% of girls). 15% of the adult Czech population consume alcohol regularly and often (drinking every day or every other day). Only 2.5% of adults abstain permanently. Average annual per capita consumption is 7.4 liters of pure alcohol (or 8.6 litersif we exclude abstainers). Frequent binge drinking (i.e. every week or more) is reported by 18% of the respondents

(28% of men, 8.6% of women). 16% of adults can be considered high-risk drinkers and 4.8% are problem drinkers.

4.1.2 Alcohol abroad

Anderson et al. (2016) reported that alcohol in the European Union is the most commonly consumed addictive drug with the most expensive consequences for the society. Its danger is often underestimated, alcohol contributes to more than 250 diagnoses.

Consumption of alcoholic beverages in the sample of university students is given a lot of attention abroad, especially in the US where problem drinking of alcohol has long been seen as an important negative factor affecting health. Results of studies conducted among university students documented that the incidence of alcohol abuse and related problems in this group are higher than in the same category of non-students (Wechsler et al., 1995; Marlatt and Witkiewitz, 2002; Bronin and Wright, 2005).

Harmful use of alcohol by university students is accompanied by a number of risks and serious consequences, including namely: driving under influence of alcohol, accidents, violent behavior (riots, fights, vandalism, destruction of property), risky sexual behavior (unprotected sex, promiscuity), violent crime, suicidal behavior, alcohol intoxication, hangover, worsening health, procrastination, impaired school performance and dropping out of school (Jones et al., 2001; Gill, 2002; Martens et al., 2005).

Wechsler et al. (1994; 2000; 2002) and O'Malley and Johnston (2002) report on studies of alcohol consumption conducted among American university students. Alcoholic beverages are used on-and-off by 40 to 45% of them.

Similar results were seen in studies carried out in European countries. For example, in Sweden, harmful use of alcohol among university students was reported by a half of women and nearly three-quarters of men. (Bendtsen et al., 2006). In the Federal Republic of Germany, a half of the Faculty of Medicine students reported at least one episode of binge drinking in the last 14 days (Keller et al., 2007).

It was found that binge drinking occurs significantly more frequently in men than women. This type of behavior has been observed mainly in people who were members of or attended student associations (Presley et al., 2002; Jackson et al. in Galanter, 2005; McCabe et al., 2005). Many authors (Wechsler et al., 1994; Wechsler et al., 1995; Baer et al., 2001) draw attention to the fact that excessive alcohol drinking during the studies can often be a continuation or escalation of previous patterns of use.

In conjunction with binge drinking, age of first intoxication also proved important. Excessive consumption and alcohol addiction were observed in students who admitted to being drunk for the first time before 19 years of age. They also showed other increased risky behaviors—driving under influence, being in a car with a driver under influence, serious injuries as a result of previous alcohol consumption (Hingson et al., 2003).

Greenbaum et al. (2005) did a study on the consumption of alcohol among students at weekly intervals during one academic year. Its results showed that drinking of alcohol increases especially during state and religious holidays, vacations, and after moving to dormitories.

Alleviating tension and stress, an effort to fit in with others and cope with them are among important incentives to harmful use of alcohol. High social tolerance and

conformity contribute to drinking—"everybody does it" (Saltz and Elandt, 1986; Jackson et al. in Galanter, 2005).

Ochaba et al. (2009) reported that there are around 30% of problem alcohol drinkers in Slovakia, particularly in the east of the country. 8% of the adult population drink beer daily, 4% of people aged 15–29 and 15% of the adult population and 15% of those aged 15–29 drink beer 2–3 times a week. 1% of adult population drink wine daily, 0% of people aged 15–29, 6% of adults and 5% of people aged 15–29 2–3 times a week. Spirits are consumed daily by 2% of the adult population and 1% of people aged 15–29, 6% of the adult sample and 7% of people aged 15–29 drink spirits 2–3 times a week.

4.1.3 Tobacco in the Czech Republic

60–75% of university students in the Czech Republic have had experience with smoking (Kachlík, 2005b; Kachlík 2005c; Kachlík and Havelková in Řehulka et al., 2008a), which exceeds the prevalence in the comparable segment of the general population of 18–24 year olds, where experience with tobacco smoking was reported by 58% of persons (ÚZIS, 2006).

According to Sovinová et al. ([online], 2014) evaluation of trends in substance abuse in Czech population over the past decade shows that almost a third of students aged 13–15 years smoke cigarettes, girls more often than boys. The share of non-smokers who admit that they are likely to start smoking next year is high, there is significantly more of so thinking girls (32%) than boys (22%). Prevalence of cigarette smoking has declined slightly more in boys than girls, number of children using tobacco products other than cigarettes has increased. Percentage of smokers among the citizens of the Czech Republic is relatively stable (28–32%). In the long term it can be concluded that the prevalence of daily smoking in adult population shows a slightly decreasing trend. Around 30% of current smokers tried to quit in last year, most often at a young age.

In surveys undertaken since 1990, the proportion of smokers among university students varies in the range of 11–36%. Considerable differences may be caused for example by different methodologies, various sizes and compositions of research samples, and local situation at universities. We can summarize that the prevalence tobacco smoking among university students is significantly influenced by the year of the research. (Henčl, 1990; Klíma, 1990; Králíková et al., 1995; Hygienická stanice hl. m. Prahy, 1996; Bečková et al., 1998; Kubíková and Bečková, 1998; Bečková et al., 1999; Cekan and Bártová, 2000; Čápová et al., 2000; Syrovcová et al., 2001; Venderová and Višňovský, 2001; Zikmundová et al., 2002; Csémy et al., 2004; Kachlík, 2005a; Kachlík and Havelková in Řehulka et al., 2008a).

Given the difficulties in comparing data collected from various universities in the Czech Republic, it would be more appropriate to calculate the higher prevalence of current smoking—approx. 30%, as demonstrated by studies carried out on large samples of students (Vondráčková et al., 2009).

Approximately 60% of current smokers are those who smoke daily (Csémy et al., 2004; Kachlík and Havelková, 2007). Prevalence of regular daily smokers among university students according to various studies ranges between 7–16% (Hygienická stanice hl. m. Prahy, 1996; Malcová et al., 1998; Zikmundová et al., 2002; Csémy et al., 2004), although in the general population it is higher—more than 30% (ÚZIS, 2006).

Men are heavier and more frequent smokers than women (Bečková et al., 1999; Cekan a Bártová, 2000; Čápová et al., 2000; Csémy et al., 2004). Furthermore, it was found that as the students graduate to higher university grades, the prevalence of their current smoking declines (Hrubá and Kachlík, 1998; Csémy et al., 2004).

Especially tobacco consumption correlates with lower levels of attained education. Smoking at the university can be preventively influenced by a number of activities which are carried out primarily at humanities-oriented faculties (e.g. Faculty of Medicine and Faculty of Education). We may also consider worse academic achievement of smokers who have a lower chance of succeeding in their studies. (Králíková et al., 1995; Hrubá and Kachlík, 1998; Mužík and Mužíková in Řehulka, 2003; Kachlík and Havelková in Řehulka et al., 2008a).

4.1.4 Tobacco abroad

In 2000, a research of prevalence of regular tobacco use among university students was conducted in 23 countries. The inquiry found that approx. 34% of males and 27% of females in this population sample smoked regularly. Major differences in prevalence between countries were observed (the fewest number of students smoked in Thailand, the most in southern Europe—Italy, Portugal, and Greece). Comparison with the general population in each country has shown that the prevalence of regular tobacco smoking among male university students is lower, while among female students the opposite is true (Rigotti et al., 2000; Steptoe et al., 2002).

Pavúk and Koščo (1997) published the results of a questionnaire study in which they monitored smoking habits and prevalence of smoking among students of the Faculty of Education in Prešov in 1982–1995. They addressed more than 1,900 respondents. In 1982, an average of 31.2% of the respondents smoked in the entire sample, of which 43.4% were men and 26.5% women. Among first-year students, the reported smoking prevalence was 20.3% (16.6% of females, 34.7% of males), among last year students it was 36.7% (30.9% of women and 51.6% of men). Data from 1991, from the next stage of the research, showed the prevalence of smokers in the first year of 26.2% (25.8% of women, 27.2% of men), in the last year of 44.3% (39.6% of women, 52.0% of men). There are more data on the prevalence of smoking among first-year students from 1995 (24.5% in total, 23.3% of females, 29.4% of males). In 1991, there was an increase in the percentage of smokers in the sample of students of the first and last year, to which the incoming first year contributed significantly, women in general. In 1995, there was a decrease in the sample of first-year student smokers compared to 1991, but still a growth compared to 1982 (both without statistical significance). In 1991–1995, the trend of increasing prevalence of smoking among women and decrease among men from the years 1982–1991 was not confirmed.

The works of Kovářová and Dóci (2004) examined the relationship between smoking and physical activity of students of the Faculty of Medicine at Pavol Jozef Šafařík University (UPJŠ) in Košice. They analyzed responses to inquiries within CINDI cardiovascular monitoring, part of which were items related to smoking and physical activity. The sample consisted of 1,104 students of the Faculty of Medicine (426 males and 678 females), in the 5th grade in 1996–2001. In the entire sample, 17.5% smoked, with three quarters of regular and one fifth of occasional smokers. The prevalence of smoking was higher among men,

and men also smoked more than women. The average daily cigarette consumption among men was 11, seven by women. The students started smoking regularly after their arrival at the university. Subjectively, men rated their physical condition better than women, the most common type of physical activity was brisk walk (cited by more than 60% of the respondents), a quarter of the respondents practiced recreational movement several times a week, about 2% of the sample actively practiced sports. There was no evidence of a general relationship between cigarette smoking and physical activity of the university students, but a significant association between daily consumption of cigarettes and bodily movement was established. Students who smoke more cigarettes per day tend to be less physically active. Due to cardiovascular prevention and prevention of addiction, strengthening of the role of physical education and applying different methods to combat smoking will be very useful.

Statistical Office of the Slovak Republic has periodically examines a representative sample of the Slovak population on the use of tobacco and other addictive substances every two years, since 1994. Since the beginning of the monitoring, proportion of non-smokers has been growing in the general population (more than 60% in 2006), and similarly among the youth. Prevalence of daily smokers increases with increasing age of the respondents, occasional smokers are the most frequent among children and adolescents (Ochaba et al., 2009).

4.1.5 Illegal addictive substances in the Czech Republic

Use of illicit drugs compared to use of alcohol is not widespread among university students (Vondráčková et al., 2009).

Marijuana clearly dominates illicit substances use among Czech university students. In different studies, at least one previous experience with it was admitted by a half of the students (Csémy et al., 2004; Kachlík and Havelková in Řehulka et al., 2008a).

Kachlík and Šimůnek (1995; 1998) have studied drug consumption and attitudes towards them among university students at MU since 1993. In the 1993–1997, they conducted an anonymous survey on a sample of 456 students (177 males and 279 females) of the 5th year at the Faculty of Medicine. They recorded high levels of the "personal immunity" syndrome when the risk of using a range of addictive substances is downplayed. Dangers of tobacco consumption were clearly admitted by the students, while that of cannabis were not. Women took more critical positions than men.

It turned out that the selected group was penetrated by the so-called "hard" drugs (opioids, cocaine, and methamphetamine). Occurrence of students who tried the "hard" was relatively low, around 2%, only cocaine experience was admitted by almost 4% of males in the school year 1993–1994. Drug abuse concerned in particular sedative drugs, used by women to relieve mental and physical problems (Kachlík and Šimůnek, 1995; Kachlík and Šimůnek, 1998).

The situation in consumption of cannabis products was substantially worse. Marijuana has become the most widely used drug in the population, with an experience reported by more than 30% of males and approx. 20% of females, while approximately 6% of males and 1% of females smoked it repeatedly. After cannabis, the second most commonly abused drug in the group of medical students were hallucinogens, mostly of natural origin (magic mushrooms). An average of 30% of males and 15% of females were regular tobacco smokers,

20% of males and 50% of females reported being non-smokers, the rest were occasional smokers and ex-smokers (Kachlík and Šimůnek, 1995; Kachlík and Šimůnek, 1998).

Faculty of Medicine students held a very tolerant attitude to marijuana (accepted by two-thirds, only 15% clearly rejected it). Percentage of rejections increased in the case of occasional (20%) and regular consumption (60%) of marijuana. A third of respondents did not take a clear position, attitudes of women were generally more critical. Medical students were much more critical towards regular smoking 20 tobacco cigarettes daily. Half of men and 65% of females clearly rejected legalization of "soft" drugs, significance of differences between the sexes grew towards the end of their studies at the university. More than three-quarters of the sample were brought to drug use by friends or casual acquaintances, 45% of the respondents took drugs out of curiosity, other prominent reasons included search for pleasure, relief from mental stress, suppression of health problems (mostly women), a feeling of fellowship and recognition by the collective. A compulsion to try drugs was reported by nearly a half of men and a third of women (Kachlík and Šimůnek, 1995; Kachlík and Šimůnek, 1998).

Apart from cannabis, frequently used addictive substances with the prevalence of previous experience around 10% are hallucinogens (LSD and magic mushrooms), club drugs (ecstasy) and abuse of depressant drugs without a prescription. Then there are stimulants (ephedrine and amphetamine derivatives were tried by 2–4% of the sample), opioids (2–3%), cocaine (approx. 2%) and inhalants (approx. 2%). Experience in the use of other substances (heroin, crack, brown) was even lower (Csémy et al., 2004).

In the case of marijuana, since 1994 there has been an increasing trend of experience with its use (from approx. 25% to 60% of the surveyed university students). A similar tendency can be observed in the use of hashish (from 6.5 to 25%), partly in LSD (from 3.5 to 7.1%), ecstasy (from 3.4 to 9%), methamphetamine (from 1.3 to 3.4%) and cocaine (from 1.2 to 2.6%). Downward trend was only apparent in inhalants (from 2.9 to 1.5%). Changes in the use of other addictive substances are not comparable, lacking the appropriate data. In regional terms, we can state that the students of universities in Prague have more experience with illicit substances than students of other universities in the country. The ratio of men and women in the studied samples may also play a role in the analysis of the changes. The Czech studies show that there are gender differences in the experience with illicit substances; men have a significantly higher prevalence, with the exception of depressant drugs without a prescription (Csémy et al., 2004; Kachlík and Havelková in Řehulka et al., 2008a; Vondráčková et al., 2009).

Use of an illicit substance in the general sample in the last year was captured in about a third of the respondents in the age range 18–24 years, of which 38% were men and 24% were women (ÚZIS, 2006).

Undergraduate students do not deviate too much from this pattern, the actual use of psychoactive substances was more frequent in males. In the last year, approx. a third of university students used marijuana, about a quarter of them in the last six months. Dance drugs and hallucinogens were used by 2–5% of the respondents, the so-called "classic hard" drugs (methamphetamine, cocaine, heroin) by no more than 1%. The results of Czech and foreign investigations showed that previous prevalence of "hard" drugs and the prevalence of their use in the last month in the samples of university students was very low (Csémy et al., 2004; SAMHSA, 2007; Kachlík and Havelková in Řehulka et al., 2008a).

Among university students, the use of illegal drugs with character of "hard" drugs (with high health and social risk) is probably limited mostly to experimentation. The results of investigations may be distorted by sampling of the respondents and their attitudes towards acceptance of substance abuse, fear of losing their anonymity. Low relative frequency of use of the so-called "hard drugs" was apparently the reason why the current studies did not study their patterns of use in detail (injection, sharing of doses, needles and syringes, etc.). (Vondráčková et al., 2009).

4.1.6 Illegal addictive substances abroad

Prevalence of consumption of illicit drugs among foreign university students is lower than among their peers in the same age group (SAMHSA, 2007).

The most popular illegal psychoactive substance is the same as in the Czech Republic—marijuana. According to data from studies in the US, about a third of university students use it in the last year, while 41–47% used it sometime before (Mohler-Kuo, 2003; Liu, 2007). Shillington and Clapp (2001) noted the problems caused by concurrent use of marijuana and drinking alcohol among university students.

Caldeira et al. (2008) reported that nearly one tenth of first-year university students met the criteria for diagnosis of some of the disorders brought about by use of marijuana. Among university students, there are more experimenters than among the general population. The most common adverse effects associated with marijuana use are problems with concentration, driving under the influence of drugs and truancy.

Other popular psychoactive substances include medicines. McCabe et al. (2005) focused on the use of prescription stimulants. Previous prevalence of experience with medicines abuse was 7%, prevalence of their use among students in the US in the last month was approx. 2%. Teter et al. (2005) observed that the most common reasons for using stimulants are promoting concentration, increased attention and euphoria.

Liu (2007) presents the results of a study conducted on a sample of more than 4,600 students in Texas. Nearly one tenth of the respondents tried cocaine at least once in life, one tenth tried stimulants including prescription drugs, similar with hallucinogens, 5% tried opioids. In the last month, cocaine was used by 1.4% of the sample, 2% use stimulants, less than 1% used hallucinogens and 1% of students tried opioids. All the signs showed a higher prevalence among men than among women.

Čaplová et al. (1997) examined the attitudes of university students to the issue of drugs using their own questionnaire with 22 items. The research involved 112 students of 4th year of the Faculties of Medicine and Law of the Comenius University in Bratislava. The backbone of the questionnaire consisted of statements from the media, to which the interviewees expressed variously strong degrees of agreement or disagreement. Significantly more women (81%) than men (71%) perceived regular marijuana smoking as a risk. Women attributed greater weight to family environment when it comes to addictions, and they believed that drug use can be abandoned only at own discretion and with strong will. Respondents showed a good level of awareness of the drug problem, but rather theoretical. They lacked accurate information about the treatment and rehabilitation of addicts.

Research is also carried out in the long term among students of 3rd to 5th year of the Faculty of Medicine of Comenius University in Bratislava (Novotný, Kolibáš, 1997;

Kolibáš, Novotný, 1998). In late 1990s, Slovak authors monitored experience of students with alcohol and other psychoactive substances, as well as their knowledge thereof. The most commonly used substance among respondents was black coffee (regularly drunk by more than 40%) and alcohol (20% of regular consumers). Regular tobacco smoking was reported by 10% of the respondents. Regular use of benzodiazepines was very rare, but was found more often as repeated. Regular and repeated consumption of alcohol and nicotine was 3–4 times more common among men, drinking coffee and use of benzodiazepines was more frequent among women. Most frequent illicit drug in the sample was marijuana (1.8% of regular consumers, repeated use was reported by additional 5.5%). Psychostimulants, ecstasy, hallucinogens were used rarely. Psychostimulants were used at least once by 2.3% of students, LSD by around 1.4% and ecstasy by 0.5%. Nobody reported having tried opioids. In evaluating knowledge, the students were the most familiar with cannabis, followed by heroin, hallucinogens, inhalants. The least known were "designer drugs" (dance drugs like ecstasy).

Another study (Kolibáš et al., 2003) used an anonymous questionnaire to study a sample that consisted of 381 students of the 3rd to 5th year of the Faculty of Medicine of the Comenius University in Bratislava, and of other faculties of the Comenius University (Education, Science, Law and Arts) and students of the Slovak Police Academy. Addictive substances most frequently used by university students in Bratislava included black coffee (48% of the sample), tobacco (14% of regular smokers) and alcoholic beverages (12% drank regularly). Regular drinking and smoking occurred more frequently in men, women more regularly drank black coffee and used medicines with addictive components (almost 4%, esp. analgesics). Of illegal substances, the most commonly abused were cannabis products (27% of males and females had at least one experience, less than 1% of the respondents used them regularly). Persons with marihuana experience were more likely to be regular consumers of tobacco and alcohol, they mostly tried other drugs, were friends with people using addictive substances. To a lesser extent, they reported personal experience with LSD, sporadically with volatile substances and opiates.

Novotný and Kolibáš (2003; 2004) presented the results of an anonymous survey in 2002 from a sample of 230 students (157 women, 73 men) of the 3rd and 5th year of the Faculty of Medicine Faculty of the Comenius University in Bratislava. 11% of the sample smoked tobacco regularly (7% of females, 21% of males), 11% of the respondents regularly drank alcohol (8% of females, 16% of males) and another 68% did so irregularly, but repeatedly. 46% of people regularly drank black coffee (a half of men and a third of women). Of illegal substances, the most commonly abused was cannabis (15% had at least one experience, 12% repeated, regular consumption of cannabis occurred sporadically). One or repeated use of cannabis was reported by 22% of females and 42% of males (the difference was statistically significant). Almost 3% had one experience with LSD, repeated use was infrequent, similar situation was described with ecstasy. A comparison of data from 2002 and 1997 shows that in 2002, the number of consumers of tobacco increased significantly, while the number of regular and occasional drinkers has not changed significantly. The frequency of drug experience with cannabis (single or repeated) increased significantly, share of regular consumers decreased slightly.

Ochaba et al. (2009) reported that the Slovak drug scene changes dynamically. It is dominated by marijuana, methamphetamine and heroin, the position of cannabis and dance

drugs has strengthened. The number of people experimenting with illegal substances has increased, in 2007 there were more than 22% of those who smoked drugs and 7% of oral users. More than one third of high school students have had experience with marijuana. There are regional differences in the use of illicit substances in different regions, Bratislava is significantly ahead. In general, the use of opioids dominates in the western Slovakia, marijuana in central Slovakia and volatile substances in the east of the country. There is a growing group of problem drug users, consisting primarily of users of opioids, cocaine and amphetamines, its size is estimated at 18,000 people.

A representative study focused on marijuana consumption among university students was conducted in the USA. In the sample of more than 17,500 students from 150 US universities, almost a quarter admitted they consumed marijuana in the last year. Its use was higher among students who drank alcoholic beverages and smoked, and among those who lived on campuses where pubs were available. Marijuana consumption was associated with poorer academic performance (Bell et al., 1997).

An extensive study was also carried out in the UK. In a sample of more than 3,000 students from 10 universities, it was found that 89% have had some experience with alcohol (61% of males and 48% of females drank regularly, 15% binge drank), 20% used cannabis regularly at least once a week, 33% have had experience with other illicit substances (mostly LSD and ecstasy), 46% of people started using addictive substances still in high school, 13% after entering the university (Webb et al., 1996).

The SAMHSA survey **(S**ubstance **A**buse and **M**ental **H**ealth **S**ervices **A**dministration) showed that in US population, 28% of 12–34 year old white males are addicted to nicotine, 6% to alcohol, 9% to marijuana and 8% to cocaine. 31% of white women are addicted to nicotine, 3% to alcohol 3%, 6% to marijuana and 11% to cocaine (CDAS, 1997; Gfroerer et al., 1997).

Monitoring of the sample of 13–48 year old Australians with a mean age of 18.9 showed that almost 99% of the respondents had contact with alcohol at least once in their lives, 96% with cannabis over 90% with hallucinogens (LSD), 83% with inhalants, 69% with amphetamines, 37% with barbiturates without a prescription, 19% with cocaine and 7% with heroin. 92%used alcohol in school, 89% cannabis, 67% LSD, 57% inhalants, 46% amphetamines, and 35% barbiturates (Lenton et al., 1997).

4.1.7 Addictive drugs and people with disabilities

Compared to the above data on intact population segments, there is relatively little information available on the issue of addiction in specific sample groups, such as people with disabilities. It can be assumed that due to their health problems they are more likely to suffer from insularity, difficulty in finding a partner or friends (depending on their degree of impairment and integration), employment, self-assertion. They may experience their feelings with a different intensity and in different way than people without disabilities. If they cannot find a helping hand, some of them might deal their problems by using drugs or other addictive activities. Persons with disabilities are given greater attention in terms of dealing with their health problems and coexistence with the majority without handicap, but mapping and long-term monitoring of their pathological addictions was more frequent abroad.

Kessler and Klein (1995) implemented a wide comparative study on a sample of nearly 41,000 intact secondary school students and nearly 500 students with disabilities in the United States. It turned out that people with disabilities often experience negative emotions, have lower levels of self-esteem, and they equally or even more often reach for addictive substances, including alcohol and tobacco, compared with intact population.

Groulíková (2015) and Groulíková and Jaklová Střihavková (2015) deal in detail with the special education dimension of addictive behavior. They refer to a number of risk factors that threaten people with some kind of disability. Notably the frequent medicine abuse, impaired metabolism and organ systems, atypical symptoms of central nervous system dysfunction, poor ability to predict risks. Even for an expert it is sometimes difficult to recognize early symptoms that are related to substance abuse among people with disabilities because they are often masked as manifestations of the disability. The authors expand on the various types of disability and their relation to addictive behavior.

If we focus on persons with disabilities (according to Vítková, 2006 this applies to locomotor and carrier system impairments, as well as nervous system disorders or damage, manifested primarily in impaired mobility), the risk of drug-related problems is higher than in general population. Their resulting condition is often associated with alcohol abuse or other addictive substances. Continued use of alcohol and/or other drugs can go hand in hands, but also completely independently (Heinemann, 1993).

Another group are people with chronic pain syndromes and spastic conditions, who often show alcohol abuse, also combined with other substances, particularly depressant drugs. Foreign epidemiological studies conducted on small samples of persons with disabilities show that drug use is more likely among people who have become disabled postnatally (in adulthood) than people whose condition was pre- or perinatal. They most often acquire addictive substances from friends, family members, and there have even been reports of dealers specialized on people with disabilities (Heinemann, 1993; Groulíková, 2015; Groulíková and Jaklová Střihavková, 2015).

According to Glass (1980), persons with physical disabilities and drugs issues can be divided into two types: type A shows signs of addictive behavior before the emergence of disability, type B afterwards. According to Heinemann et al. (1989) type A is predominant, while the disability often occurs due to an accident that happened in direct relation to drug use. Incidence of drug use after the emergence of physical disability is relatively sparse.

Kachlík et al. (2009) implemented a pilot survey in which they used an anonymous questionnaire to address 228 clients with motor disabilities from a social care institution. In the examined sample numerous experiences with a variety of addictive substances and activities of the nature of addictive behavior were found. These people usually respect the advice of parents, teachers and therapists and are more resistant to massive testing and further drug use more than the majority population without health handicaps. The lower incidence of tobacco and marijuana was a surprising finding (in the general population, 50–60% of adolescents and young adults experimented with it, while it was only 16% in the sample), incidence of alcohol abstainers was also higher (10%). There have been experiments with opioids and stimulants, hallucinogens, inhalants, and dance drugs. Depressants were illegally used in the examined sample more often than in the general population (especially among women), also during the last six months and a month before the study. Gambling on slot machines remained mostly at the level of 1–3 experiments,

one fifth of the sample tried it before. The respondents most often spent 1–3 hours a day watching TV and video and DVD, the situation in playing computer games was similar. They spent up to 1 hour a day with online activities and 10–30 using a mobile phone. The respondents were mostly motivated to substance use by friends, an alarming fact is that the parents ranked second in this regard, 16% of the respondents have met a drug trafficker (dealer). Key reasons why they tried drugs involved suppression of health problems, curiosity, evoking of pleasant states. The most readily available substances were depressants, cannabis, hallucinogens, inhalants, and club drugs (Kachlík, 2011a).

4.2 Other types of risky behavior including the so-called virtual drugs in selected population segments

Most previous studies focused on narcotics and psychotropic substances of material nature (substances). The so-called virtual drugs (pathological gambling, Internet addiction, computer, television, video, mobile phone, etc.) hat have the character of addictive behavior were studied to lesser extent (see for example Nešpor, 2000; Nešpor and Csémy, 2007; Csémy et al., 2008; Vondráčková et al., 2009).

With changing social climate and lifestyle, elements of addiction to virtual drugs are reflected not only in child and adolescent population, but also among adults, including university students. Problematic "consumption" of potentially addictive activities often leads to a deterioration in academic performance, dropout due to failure to meet and marginalization of basic obligations, and other family and subsistence difficulties. University students, compared with general population, have very easy access to the latest communications technologies, use them more often, they can relatively easily change their daily routines, which increases the risk of possible addiction. It is supported by the fact that it is now possible to legally register and gamble or bet in the Czech Internet environment, if the person is legally of age. Affordability of computing and communication technology and internet connection at home also play a role (Nešpor, 1994; Nešpor, 2000; Strach in Řehulka et al., 2008).

Addictive behavior appearing on the basis of uncontrolled use of ICT and pathological gambling frequently leads to poor academic results, tardiness or absenteeism, visual impairment, lack of sleep, musculoskeletal pain, fatigue, loss of funds intended to cover education and living needs, consequences in the social sphere (Scherer, 1997; Morahan-Martin and Schumacher, 2000; Chou, 2001; Stinchfield et al., 2006). Some sources indicate that communication over the Internet can help establish and strengthen interpersonal relationships, while others oppose it and remind us that this method of communication loosens social relations and leads to isolation (Vondráčková et al., 2009).

Addictive behavior over time affects all health qualities—physical, psychological and social. (Nešpor, 2000; Strach in Řehulka et al., 2008)

4.2.1 Virtual drugs in the Czech Republic

In 1994, the City Health Administration in Prague conducted extensive research focused on monitoring of substance abuse and addictive behavior, including gaming and slot

machines in a sample of about 2,000 university students from across the country. Playing in the last month was admitted by more than 60% of the respondents, of which more than one-tenth played 6 times or more often. (HSHMP 1996)

Availability of ICT since 1994 has greatly increased, and therefore we can currently expect a higher proportion of players among students (Vondráčková et al., 2009; Vondráčková Holcnerová et al., 2009). Nešpor and Csémy (2005) point out that the prevalence of pathological gambling will be very high, even in international comparison, due to above-average availability of gambling in the Czech Republic. The number of patients hospitalized with this diagnosis is increasing, the incidence of regular playing is much more common in men and increases with age (Nešpor and Csémy, 2005). 4% of eighteen-year olds gamble at least once a week. (Csémy et al. [online], 2006; Csémy et al. [online], 2008)

Vondráčková et al. (2009) conclude that the distribution by sex and trends in the sample of university students are similar: men will play more often and the incidence of playing will in recent years will rather increase, however, there is a lack of data for more precise estimates. Risky or problematic behavior in relation to ICT in the CR was monitored by only a few studies that have always focused on the Internet.

Vondráčková Holcnerová et al. (2009) describe research that analyzed a group of 341 university students among whom was identified 6% of addicts and where significant differences between the sexes were found (9% of males and only 1% of females showed symptoms of addiction) and between study courses (1% of addicts among students of humanities, 9% among science students).

Šimková and Činčera (2004) suggested that there is a significant difference between the average time spent online per week between addicted and non-addicted respondents: university students with addictive behavior spends an average of 44 hours per week on the Internet, others only 13 hours. The authors followed problem use of ICT in a sample of more than 300 people. There were statistically significant differences in the incidence of elements of ICT addictive behavior (more in men and in people with risky behavior). The problem was perceived rather in isolation, without a broader context of the lifestyles of the respondents.

Galázc and Šmahel ([online], 2007) published the results of a representative survey for the World Internet Project, showing that 100% of Czech university students used internet in 2006, while in the general population in the age group 18–29 years, the same research found only 74% of internet users.

Blinka ([online], 2008) identified 5% of addicts in the age group of 20–26 years, and another 4% of the respondents at risk of addiction. Occurrence of addictive behavior decreases with increasing age (Blinka [online], 2008), accessibility and use of the Internet increases with higher education (Galázc and Šmahel [online], 2007). These facts it shows that the population of university students is one of the most at risk of addictive behavior groups in connection with the use of the Internet (Vondráčková et al., 2009; Vondráčková Holcnerová et al., 2009).

Kachlík and Havelková (2007; in Řehulka et al., 2007) included several issues related to the incidence of gambling in the studied sample in the mapping of university drug scene at MU. The polling, however, was more broadly focused, with an emphasis on substance addiction.

In 2009, a feasibility study focused on addictive behavior was performed on undergraduate students of Masaryk University. Using an anonymous questionnaire with 21 items, 2,475 full-time students of all nine faculties were interviewed. It mapped playing on gaming machines, computers and video consoles, mobile phone use, internet, gambling, eating disorders, financial loans and internet banking. Another set of items monitored the reasons that led to some of the respondents' described activities, their availability, and attitudes towards selected potentially risky behaviors. Questions were also focused on leisure, counselling and therapeutic services, views on the importance of inclusion of virtual drugs into courses at MU (Kachlík and Havelková in Linhartová et al., 2010).

4.2.2 Virtual drugs abroad

Recently, attention has focused on addictive behavior in connection with the use of advanced ICT, especially the Internet, where we speak of the so-called internet addiction—or netoholism or netomania. (Young, 1998; Beard and Wolf, 2001; Ko et al., 2005) Undergraduate students are familiar with ICT, they can easily access the Internet, and are able to flexibly manage their time, after entering the university they find themselves in a changed environment where they establish new social relationships, which a computer network can facilitate (Morahan-Martin and Schumacher, 2000; Chou, 2001; Nalwa and Anand, 2003).

The incidence and circumstances of problematic Internet use among university students were studied by Morahan-Martin and Schumacher (2000). Of the nearly 300 people, about a tenth showed signs of problem users. It was mostly men who were socially and psychologically engaged in network activities (chat rooms, games).

The relative incidence of addictive behavior associated with the use of Internet among the university sample abroad varies between 6–13% (Scherer, 1997; Chou and Hsiao, 2000; Morahan-Martin and Schumacher, 2000). Only a very small percentage of internet users are able to recognize the impact of the addiction on their lives (Anderson, 2001; Yuen and Lavin, 2004). Students with risky behavior towards the Internet use more chat, e-mail and online computer games (Chou, 2001).

Chou and Hsiao (2000) studied the issue of dependency on ICT among Taiwanese university students. People in the sample often used interactive network applications, they spent a substantial portion of free time at the computer and had problems with absences and academic results.

Pathological gambling partly includes internet addiction, because gambling includes, among others, online betting and gambling in online casinos. In the US, prevalence of pathological gambling is reported in the range of 3–5% of university students. (LaBrie et al., 2003; Stinchfield et al., 2006). In pathological gambling, a strong correlation was found between the use of alcohol and other illicit substances (Clark, 2003; LaBrie et al., 2003).

LaBrie et al. (2003) conducted a US national research on pathological gambling among university students. They approached more than 10,000 people. Addiction to gambling correlated with the use of a range of addictive substances, both legal and illegal, and with risky sexual behavior.

Engwall et al. (2004) studied a sample of 1,400 respondents from among university students in the United States. A fifth of men and a twentieth of women showed signs of

problem gaming, which was already detrimental to their health and was associated with higher levels of consumption of legal drugs and cannabis.

4.3 Mapping of activities and the level of drug prevention at Masaryk University

Effective addiction prevention programs should contain professionally presented information, especially on long-term negative effects of drugs, adequate enhancing of self-esteem and opportunities for realization of life goals, preparing young people for conflict management, peer pressure, development of social skills and knowing how to reject drugs (Nešpor and Csémy, 1996).

The Czech Republic still has not paid sufficient attention to creating comprehensive interventions for such a specific target group as university students with substance or ICT abuse (Vondráčková et al., 2009).

4.3.1 Prevention in Czech Republic

Hrubá has been successfully implementing a comprehensive program of preventive anti-smoking campaign on the students of the Faculty of Medicine, Masaryk University, for more than 15 years. She also approached various clinical facilities so that students learn latest medicinal theoretical and practical knowledge about smoking tobacco and the options in reducing it. During the studies, a positive model doctor-non-smoker is formed, students are trained to reach out and convince their prospective patients to successfully manage their smoking problem. The proposed model caught on and it was successfully applied at other universities in the Czech Republic (Hrubá and Kachlík, 1998).

Apart from the anti-smoking effects, the medics in internship at the Institute of Preventive Medicine were also approached with activities related to primary prevention of abuse of non-tobacco drugs. Prevention of addiction was discussed also in the education of future teachers and anchored in study materials. Cooperation with the Counselling Center at the Masaryk University has been enhanced and the students had a chance to deal their problems with addictions right on campus. However, interviews with students revealed that they did not put too much trust in the counselling center, as it is located directly in the university premises (rector's office) and they fear losing their anonymity and lack of privacy. It would be more acceptable to have the drug counselling available at the dormitory, but the favorite idea was that of an external counselling center entirely outside the university premises (Kachlík and Šimůnek, 1995; Kachlík and Šimůnek, 1998).

A course focused on influencing attitudes and opinions of smoking medical students was introduced at the Faculty of Medicine Faculty of Charles University in Prague (Králíková et al., 1995).

At the Faculty of Education, in the framework of the research project of prof. PhDr. Evžen Řehulka, PhD entitled *"School and Health for the 21st Century"*, a concept of health education at the university was drawn up and implemented, which is directly (contact teaching of health, clinical, biological and psychological subjects) or indirectly (holistic concept of health from various perspectives, for example historical, geographical, linguistic)

embedded in the missions of individual departments towards their students. The issue also affects social pathologies, addictions and their prevention in school and family environment. The faculty organizes workshops for people from faculties of education from Czech universities every year, which are designed to exchange knowledge and experience in the field of Health Education (Mužík and Mužíková in Řehulka, 2003).

Vondráčková et al. (2009) report that an Addictology Outpatient Hospital was established at the Center for Addictology at the Psychiatry Clinic of the Faculty of Medicine at the Charles University in Prague, offering psychological counselling for students and staff of universities and their family members whose health and social situation are currently or prospectively vulnerable to substance and ICT abuse. The outpatient hospital involves Internet consulting. The Addictology Outpatient Hospital focuses on preventing early dropouts and timely and professional assistance in the field of information services and various forms of psychotherapy, counselling, crisis intervention, and links to other services.

4.3.2 Prevention abroad

In England, they used a prevention program against alcohol abuse. Community organizations opened an experimental pub in a university dorm managed by senior students—graduates of alcohol education course. The aim of the program was to modify the average consumption of alcohol per capita. Input data and prospective studies investigated the level of alcohol consumption, frequency of problems and attitudes to drinking. Participation in events connected with the project was high. The students increased their consumption of soft drinks and changed their attitudes towards excessive drinking, their relationship to alcohol and driving, to the concept of university fun and entertainment. The results showed, however, that consumption of beer, wine and hard liquor did not drop significantly, and similarly the frequency of problems related to excessive alcohol consumption, i.e. hangovers, drunk driving, rioting and disorder was not affected (Mills, 1983).

In the US, three approaches to alcohol education programs were compared: a program aimed at understanding the risks, a program aimed at taking the right decisions and a program aimed at clarifying the values of life. The program aimed at understanding the risks was the most effective in increasing the awareness and it was accepted the best, while strategies focused on the value chain appeared the least effective, which was also confirmed in assessing of the impact of the current and expected consumption of alcohol by the respondents. (Goodstadt and Sheppard, 1983)

The program involving US universities in prevention of problems caused by alcohol examined the effectiveness of advertising campaigns carried out by mail. It monitored the willingness of students to participate, gain knowledge, reduce alcohol consumption and the incidence of drunk driving. The survey showed that 93% of the sample read the mail, their knowledge has improved, but their behavior has not changed (McCarthy et al., 1983).

Tobler (1986) dealt with 143 studies that evaluated the effectiveness of prevention programs for damage caused by addictive substances in adolescents. Using the technique of meta-analysis she found that peer programs were highly effective in an average teenage school sample and were able, among other things, to affect the use of various drugs, such as alcohol, tobacco, and other "soft" and "hard" drugs. For adolescents who already abused

addictive substances, failed in school and had a history of delinquent behavior, offering positive alternatives turned out to be very effective.

Perry et al. (1989) describe the results of a program implemented by the Department of Mental Health, WHO in Geneva in collaboration with experts from Australia, Chile, Norway and Swaziland. Its main objective was to delay encounter with alcohol or reduce its use among a sample of 13 and 14 year olds. The project involved 25 schools with students from middle or lower social classes, who were divided into a group using active participation of trained peer activists, a group led only by teachers and a control group. Both intervention groups were exposed to identical program based on socio-psychological effects (training of resistance to negative social influence, practicing of refusing) and attempting to reduce alcohol consumption among adolescents. The data were collected before the experiment, the data on alcohol consumption were collected two months after completion. The results showed that peer programs are effective in reducing alcohol consumption among adolescents in different cultures.

Department of Preventive Medicine, University of Southern California, published 6 articles important in the area of research and drug prevention. It concerned: joint reduction of supply and demand, the choice of prevention strategies to reach sample groups at high risk, complex or extended prevention in appealing to the target sample in several lines and periods, transfer of new technologies, development of research on prevention methods and the use of interfaces between basic research and social science disciplines (Pentz, 1994).

University students, especially those who drink alcohol heavily, tend to overestimate the frequency of excessive drinking among their peers. Self-regulation model predicts that feedback informing about the actual occurrence of undesirable deviations from the normative standard could be the reason for the correction of behavior in a desirable direction, i.e. towards accepted norms. The model was used in a study of 568 American university students from the University of New Mexico, Albuquerque, of whom 64 were identified as heavy drinkers who were offered the opportunity to participate in the study of alcoholism. Roughly one third of students (26) agreed to participate and provide detailed information about their consumption habits. Some of them received feedback by mail, focusing on the comparison of their drinking with general social norms. In subsequent interviews, the subjects affected by the feedback showed a reduction in weekly alcohol consumption and typical signs of intoxication, compared to control groups. This simple intervention with feedback, not requiring personal contact, may be an effective strategy for reducing hazardous drinking (Agostinelli et al., 1995).

Botvin et al. (1995) published the results of an extensive preventive program, which was conducted in 56 public schools and was based on social skills training, mainly on increasing of self-confidence, ability to resist advertising, managing of anxiety, communicating, building of relationships, assertiveness, refusing of addictive substances and defense against social pressure. An anonymous questionnaire focused on consumption of addictive substances interviewed nearly 3,600 graduates of the program. It turned out that the intervention group, compared to the control group, had 44% fewer users of illegal drugs and 66% fewer adolescents who took more than one drug (e.g. alcohol, tobacco and marijuana). Respondents from the intervention group also consumed significantly less tobacco and resorted to riskier forms of drinking less frequently. The students were influenced by their teachers who received printed materials and videos and attended

a one-day seminar. Intervention effect was observed even when the teachers did not attend the seminar and only used the supplied materials.

Orosová and Schnitzerová (1997) reported on a communicative training program of addiction prevention for students of the Faculty of Education, Šafařík University in Košice. The readiness of students for drug activities was influenced by their experience with addictive substances, attitudes towards them and acceptance of programs of primary prevention of addictions, which was mapped a questionnaire study. 77 prospective teachers and 125 students of non-teaching majors were interviewed. 47% of the respondents (especially future teachers) expressed significantly negative attitudes towards drugs, 52% took slightly negative to neutral position, 1% slightly positive. Negative attitudes to drugs were reported significantly more often by women, non-smokers and non-drinkers. Among students, there are significant differences of opinion between regarding individual areas of preventive work and the evaluation of readiness to work with students, which why integration of information and skills in the field of addiction prevention in undergraduate teaching is crucial.

Universities in the US prevent the growth of consumption of addictive substances among their students, in addition to their own preventive programs, also through realization of the so-called "clean" (substance-free or alcohol-free) living in campuses. It is not practically feasible to fully eradicate availability of drugs, but this way of living leads to reducing the problems associated with drug use (Wechsler et al., 2001a; Wechsler et al., 2001b; Novotný and Kolibáš, 2004).

At the Faculty of Medicine, Šafařík University in Košice, teaching at the Faculty of Medicine involves elements of education for healthy lifestyle. Apart from a healthy diet, appropriate physical activity and mental health, they also focus on prevention of excessive consumption of alcohol, tobacco and illicit drugs, cooperating with Czech and foreign specialized institutions (Avdičová et al., 2007; Bernasovská et al. in Životné podmienky a zdravie: zborník vedeckých prác, 2006, 2007; Kimáková, 2008; Kimáková, 2009; Kimáková et al., 2014).

In the US, they focused on creating intervention programs for students abusing alcohol, because this kind of behavior is considered a serious health problem in American universities (Oswalt et al., 2007). However, there are also intervention programs targeted at tobacco users and ICT (Prokhorov et al., 2007). NIAAA ([online], 2002) notes that effective intervention should intervene in three different levels: the individual student who has issues with the use of addictive substances, students as a group, and the whole university environment.

Assessment of the effectiveness of interventions for university students showed that the length of intervention does not affect the effectiveness of the program and the programs that also offer the option to acquire new skills are the most effective, particularly in relation to the control of use versus programs directed only at increasing knowledge (Walters et al., 2000).

As part of the action at the individual level, brief motivational interventions with elements of cognitive behavioral skills training have had the most success (e.g. Borsari and Carey, 2000; Baer et al., 2001). The effects of these programs include reducing the amount and frequency of consumption of addictive substances, increased risk perception

and reducing the negative effects associated with the use (Oswalt et al., 2007; Borsari and Carey, 2000).

BASIC program (**Br**ief **A**lcohol **S**creening and **I**ntervention of **C**ollege Students) is one of the most commonly applied in practice (Marlatt and Witkiewitz, 2002). It consists of two sessions of 50 minutes each, in which students complete a questionnaire mapping the ways of alcohol use, risky situations leading to its use and attitudes toward drinking. Based on the evaluation of the questionnaire, they receive feedback about their use of alcohol in comparison with those in the general population of students (Chiauzzi et al., 2005).

The progress of modern ICT (especially interactive websites, e-mail) opened new intervention options for obtaining feedback from students. The efficacy of this form has been confirmed on several occasions in the case of alcohol (Walters et al., 2000; Chiauzzi et al. 2005; Walters et al., 2007) and tobacco (Prokhorov et al., 2007).

It was also found that most students prefer, compared to individual or group counselling, intervention in the form of an unassisted method focused only on the users, or minimal contact methods (Walters et al., 2007).

These include programs such as e-CHUG and MyStudentBody. They operate on the principle of delivery of personalized feedback after filling out an online questionnaire by the student. The feedback includes the amount of alcohol consumed, compared with average student population, the amount of money spent on alcohol. Finally, there is always an explanation and advice or recommendations and contacts for local organizations dealing with alcohol abuse (Walters et al., 2007; Chiauzzi et al., 2005).

Groups of students may use training courses focusing on alcohol and its use (Walters et al., 2000). Small groups have successfully used ASTP (Alcohol Skills Traning Programme), in which students meet 6–8 times each week in a classroom. Interventions included didactic presentations on the effects of alcohol, modification of thinking and social skills (Marlatt and Witkiewitz, 2002).

General improvement in students' knowledge can be achieved by media campaigns about alcohol use or setting up websites (NIAAA [online], 2002). Merely raising awareness of and focus on changing values have little effect in comparison with programs aimed at changing attitudes and improving certain skills (Nešpor and Csémy, 1996; Chiauzzi et al., 2005).

Interventions aimed at university environment and surroundings most often take the form of bans on the use of addictive substances, including alcohol and tobacco products in university dormitories and declaring of university premises substance-free zone. Other activities can include training programs for dormitory and university staff, teaching them to recognize drug addicts (esp. alcohol) among students (Walters et al., 2000; NIAAA [online], 2002; Wechsler et al., 2001b).

Conclusion

Addictive behavior of full-time students of Masaryk University—addictive substances

Data analysis focused on contacts with addictive substances and their consumption showed that more than three quarters of students surveyed used tobacco, for the first time usually between 10 and 18 years of age, one tenth of the sample smoked after 18 years of age, 5% tried tobacco under the age of 10 years, almost 40% of the respondents smoked in the last week before the study.

Almost 99 out of 100 people drunk alcohol sometime in life, women rather occasionally, men regularly, the first contacts with alcohol were between 10 and 18 years of age, 3% of the sample drank alcoholic beverages after 18 years of age, one tenth of the sample tried alcohol under the age of 10 years, nearly three quarters of the respondents consumed alcohol in the last week before the study.

Black coffee was tried by 80% of the sample, its regular drinkers are in particular women, most people had their first experience with drinking black coffee between 15 and 18 years of age, half of the respondents drank it in the last week preceding the interview.

Marijuana was tried at least once in life by 60% of the respondents, more by men. First use of marijuana peaked in the age group 15–18 years, experiments (1–3 times) were admitted by a third of the sample. In the last month, it was consumed by 16% of the sample, with a strong predominance of men, marijuana was used more than 10 times by 45% of the respondents, again dominated by men. Hashish or hashish oil was at least once tried by a quarter of students, mostly males. The first experience with hashish or hashish oil took place mostly between 15 and 18 years of age, mostly as 1–3 experiments. In the last month, the substance was consumed by 4% of the sample, again with a predominance of men.

Club drugs were at least once used by 9% of respondents, by less than 1% of the sample in the last month, with a predominance of males. The first experience was made at the age of 15–18 years and in early adulthood, in two thirds of the cases these were sporadic experiments.

Depressant drugs without a prescription or expert advice were used at least once by 8% of the respondents (more women). Approximately half of them took depressants to deliberately influence mental state for the first time in early adulthood, 40% between 15 and 18 years of age, roughly 40% only "tried it", 40% used it 4–10 times, one fifth more than 10 times. In the last month prior to the survey, less than 1% of the sample admitted they consumed (more women).

Hallucinogens were at least once used by 7% of the sample, more men. The first contacts with hallucinogens most often fell within the age range of 15–18 years and early adulthood, 60% used hallucinogens experimentally (1–3 times), one third more often (4–10 times). In the last month, consumption of hallucinogens was reported by 0.5% of all surveyed, again with a predominance of men. Hallucinogenic mushrooms (esp. magic mushrooms) were ever tried by almost twice as many people as hallucinogens in general, more by men.

Age of the first use of hallucinogenic mushrooms is the same as the period of the first use of hallucinogens in general, hallucinogenic mushrooms were ingested 1–3 times by 60%, 4-10 times by a quarter. In the last 30 days, less than 1% of the sample admitted having used, with a predominance of males.

Fewer than 5% of respondents had at least one previous experience with the so-called "hard" drugs, more men, the first contacts fell into the interval 15–18 years of age and in early adulthood, half of the cases were 1–3 experiments.

The respondents were most often motivated to use drugs by friends, followed by the influence of the partner and random acquaintances. Encountered drug trafficker were in 10% students outside of MU, 4% MU students, 2% students of the same faculty as the respondent. One or two meetings with fake or cut drugs was admitted by 10% of the sample, frequent contact was reported by 3%.

The dominant reasons for drug use in the sample included recognition by others, curiosity, with lower frequencies were reported evoking of pleasant feelings, psychological stress relaxation and spirituality. The respondents reported marijuana as very easily accessible, dance drugs and hallucinogens as relatively easy to get. Friends of the respondents most often used marijuana, followed by dance drugs, hallucinogens and methamphetamine.

Attitudes toward regular daily consumption of tobacco differed according to gender (matched with 9% of males and 4.5% of females), there was a similar situation with views on regular use of marijuana (16% of males and 6% of females approved), experimental use of "hard "drugs was approved by 8% of males and 3% of females, experimental use of "soft" drugs was generally approved by 31% of males and 19% of females, use of marijuana by 66% of males and 56% of females, whose attitudes were very benevolent.

Legalization of any drug was decisively opposed by 13% of the sample, allowing selected substances to be used legally would be supported by 53% of the respondents (more women), legalization of the so called "soft" (especially cannabis) drugs was approved by a quarter of the respondents, of all drugs by less than 2% of the population (in both cases more men).

Addictive behavior of full-time students at Masaryk University—other kinds of risky behavior including the so-called virtual drugs

Virtual drugs and addiction to them can be viewed as a new potential danger for individuals and society. Their occurrence is related to the increasing use of modern information and communication technologies, even among adults.

The respondents' answers indicate that a third of respondents played on gaming machine, more men, a fifth on gambling machines, more men again. 80% played a video computer/console game, the time spent playing daily was mostly one hour. A third of the respondents typically used their mobile device to make phone calls, one half to send text or picture messages, usually 1 hour per day in total. Internet is used by 40% of respondents to surf the web, approximately 15% work with web applications, similar number use e-mail or are involved in social networking, and one tenth chats online. Most monitored persons spend 1–3 hours a day by on-line work or entertainment. More than three quarters of the sample encountered some risk on the Internet, in particular viruses, worms and Trojans,

junk mail (spam), pirated software and phishing (personal data, passwords), presentation of racism and xenophobia.

More than 40% of the sample have bet before, men more frequently. Among men prevailed tips on sports, among women numeric lotteries. Women admitted eating disorders, both bulimia and anorexia, they asked for professional help. For gambling/betting, about 3% of respondents borrowed money, more men, most of the debt was repaid on time. Almost three quarters of the respondents used internet banking, usually several times a month. Nearly a third of the sample bought more expensive consumer goods that they did not necessarily need, 5% had to take a loan. Most were brought to playing or betting by friends and casual acquaintances. The main reasons mentioned included curiosity, evoking of pleasant feelings or elimination of psychological stress, or quick profit.

Availability of computers and Internet is very easy for the respondents, availability of betting and slot machines relatively easy. Two-thirds of the respondents agree with the regular use of mobile phone for more than an hour a day, a third with regular video computer/console games for more than an hour a and with an experiment playing games on a gaming machine, 40% with betting experiments, three-quarters surf the Internet for more than an hour a day. Counselling and therapeutic services for addictive behavior have been used by only approx. 1% of the respondents. Most respondents considered the issue of virtual drugs to be important and they think that MU gives sufficient attention to it, which, however, is not in line with the outcomes of the investigation aimed at preventive activities at MU.

Mapping of activities and the level of drug prevention at Masaryk University

Analysis of the answers of the respondents of this study showed that virtually everybody encountered some form of prevention of addictive behavior at high school. 94% of the respondents were talked to by their school teachers about prevention of addiction, but two-thirds of it were just isolated activities. In high school, it was mainly primary prevention in the form of lectures with debates, discussions with experts, free lectures, discussions with former drug users or visits to preventive centers were mentioned less frequently, other options were mentioned infrequently. Nearly 56% of the respondents encountered prevention of addictions to licit and illicit addictive substances at high school, but only 14% completed comprehensive prevention of addictive behavior, including addiction to the so-called virtual drugs. Only 18% of the respondents considered secondary prevention of addiction to be systematic, 41% of the respondents indicated that eating disorders and their prevention were mentioned in high school. More than a third (36%) of the respondents evaluated highs school prevention of addictions as useful, 27% could not give an opinion, 37% criticized it (they found the prevention either very vaguely focused, or even as a total waste of time).

More than a fifth (22%) of the sample encountered prevention of addictions at MU, with the highest frequencies of positive responses at the faculties of Education, Computer Science, Medicine and Science. Similarly, a fifth of the respondents encountered prevention at MU in the classroom. Contact with prevention options in dorms (less than 2%) and at

various educational and special interest events organized by the University were much less frequent (2%). More than a tenth of the observed group encountered addiction prevention at MU in required courses, nearly 2% in optional courses, 8% in elective courses; most were students of the faculties of Education, Science, Computer Science and Medicine.

According to the respondents, prevention for MU students used mainly monologue lectures (mentioned by 12% of the sample), occasionally lectures with discussion (4%) and involvement in university preventive programs (less than 2%), other options (discussions with experts, visits to treatment centers for addicts and participation in art and sporting events) were less frequent than 1% in the entire sample.

Nearly 84% of the respondents said that university prevention activities were mainly related to alcohol and nicotine issues, only 10% of the sample were addressed by a complexly conceived pathological addictions prevention (addiction to substances, virtual drugs, other types of addictive behavior), especially at humanities-oriented faculties. Only 3% of the respondents believed that the preventive activity was of systematic nature, the remaining majority clearly believed there was not enough continuity and systematic approach in the prevention. 11% of the sample encountered mentions of eating disorders and their prevention at the, clearly dominated by women.

Nearly two-thirds of the monitored group (60%) considered prevention of addictions at the university as useful, though not always targeted (4%), 31% held no opinion and one tenth was critical (unclear focus, uselessness, even a waste of time). According to almost 92% of the respondents the primary prevention of addictions is not devoted enough time at the University, variety of options in preventive activities at MU was assessed similarly (perceived by 90% of the sample as poor). The addressed respondents would prefer introduction or increased use of discussions with experts (51% of the sample) and with former drug users (52%), followed by a visit to a preventive or therapeutic facility focused on pathological addiction (46%), one third of the respondents would support and enhance cooperation on preventive projects (grant), various preventive activities in university dormitories and out-of-dorm events (educational, artistic, sporting, etc.), a fifth would prefer interpretative discussions in the classroom.

Only 3% of the sample admitted single or multiple visits to the existing Counselling Center of the University, practically only women. A third of the respondents would agree to an expansion of the already functioning counselling services for students of the University with addiction issues, while the rest of the respondents considered the topic to be pressing. 32% of the sample would keep the center for drug counselling at MU in the present Counselling Center of the University, 14% would place it in a MU dormitory building, 25% would prefer to have the center in a faculty building and 29% of the sample would locate it away from the University.

Summary

The publication presents in detail the research results of 3 unique studies on substance drugs, addictive behavior of non-substance nature and prevention of addictions in samples of full-time students at the Masaryk University.

The text consists of a brief introduction to the issue, describing the situation in matters relating to substance abuse and behavior in the world, in Europe, in the Czech Republic and in selected segments of the sample—among university students and among persons with disabilities. It is followed by a section devoted to methodology—characteristics of applied research tools, selection and monitored samples, evaluated indicators and processing of collected data. The section containing research data, their description and interpretation presents the results in text and table form. In the discussion, the outcomes are compared with similar surveys by Czech and foreign authors.

The results of the first study showed that more than three quarters of the sample have previously used tobacco, only one tenth legally, almost 40% of the respondents smoked in the last week before the survey. Previous prevalence of experience with alcohol was 99%, only 3% of the sample consumed alcoholic beverages legally, women drank more occasionally, men regularly. Almost three quarters of the respondents admitted having drunk alcohol in the last week before the survey. Black coffee was previously drunk by 80% of the sample, women are its more regular consumers, half of the respondents drank black coffee in the last week preceding the interview.

Prevalence of previous experience with marijuana was 60%, 25% for hashish oil and hashish. Marijuana was consumed in the last month by 16% of the sample, significantly more by men, 4% used hashish and hashish oil, again with a predominance of men. Prevalence of previous experience with hallucinogens was 13%, higher among men, consumed by 1% of the respondents in the last month, particularly by men, mostly involving magic mushrooms. Depressant medications without a prescription were tried by 8% of the sample, nearly 1% in the last month, always dominated by women. A tenth of the sample had previous experience with club drugs, used by approx. 1% in the past month, mostly males. At least one life experience with the so-called "hard" drugs was reported by fewer than 5% of the respondents, mostly men, the first contacts fell into the interval 15–18 years of age and in early adulthood, half of the sample tried 1–3 experiments.

The respondents are most often persuaded to a drug experiment by friends, partner(s) and casual acquaintances. The drug use was usually a result of the need for recognition by others, curiosity, craving to evoke pleasant feelings, relieve stress and spirituality. Marijuana is considered the most readily available, dance drugs and hallucinogens are relatively easy to get. On campus, there has been activity of drug dealers. Attitudes of men to consumption of addictive substances are riskier than of women, in particular with regard to experiments with marijuana and other "soft" drugs and their occasional use.

The second study focused on addictive behavior of non-substance nature (computer, internet, online banking, slot machines, mobile phones, betting, shopping, borrowing money).

Prevalence of previous experience with gaming machines was 30%, 20% with gambling machines, more common among men. 80% played video computer/console games, the time spent playing daily was mostly one hour. The respondents most commonly used Internet to surf the web, email, social networking and chatting. Most of them are connected one to three hours per day, more than three-quarters of the respondents have encountered some type of risk on the internet (viruses, spam, phishing, pirated software, presentation of racism and xenophobia). A third of respondents used their mobile phone up to one hour a day, mostly to make calls and send text or picture messages. More than 40% of the sample have bet before, 3% borrowed money because of play or bet, men more frequently. They were mostly brought to playing or betting by friends and casual acquaintances, main reasons involved curiosity, craving to evoke pleasant feelings, stress relief, or quick profit. Almost three quarters of the respondents used internet banking a few times a month, a third of the sample bought more expensive consumer goods that they did not necessarily need, 5% have taken consumer credit. Women admitted to incidence of eating disorders and having sought professional help because of it.

Availability of advanced information and communication technologies is very easy for the respondents, availability of betting and slot machines is relatively easy, many of them do not see any potential risk of a bigger problem in their intensive use.

The third study mapped activities and the level of drug prevention at the University. Virtually all students in the sample encountered addiction prevention in high school, but those were mostly sporadic and less complex activities without greater involvement of independent parties. More than a third of the sample evaluated the secondary prevention of addiction as useful, a similarly large group as unclear in focus, or as a complete waste of time.

More than a fifth of the respondents encountered addiction prevention and prevention in elective courses, mainly at the faculties of Education, Computer Science, Medicine and Science. Preventive activities in dormitories, university education and special interest events were infrequent. Most widely used preventive actions include monologue lectures, with missing feedback and active participation of students in projects of prevention, the same applies to external experts or visits to specialized addictology facilities. Prevention is mainly focused on the issue of alcohol and tobacco addiction, it lacks continuity and systematic nature, the programs are rarely holistic in nature (substance drugs and various kinds of addictive behavior), taking place mainly at humanities faculties.

Nearly two-thirds of the monitored group consider the university addiction prevention useful, though not always targeted, one third has no opinion, one tenth see it as vague, useless, or even as waste of time. More than 90 % of students would like the University to dedicate enough time and resources to prevention and to substantially improve the range of activities. A previous visit to the existing University Counselling Center was admitted by 3% of the sample, a third of the respondents would agree to extend its services with the issue of addictions. More than two-thirds of the students would move the counselling facility elsewhere (to dorms, faculty building, outside the university premises).

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ADDICTIVE BEHAVIOR OF FULL-TIME STUDENTS AT MASARYK UNIVERSITY AND OPTIONS IN ITS PREVENTION

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