Prevention of Drug Addiction Among Children and Youth

Prevence drogových závislostí u dětí a mládeže

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Abstract:

While the results of the ESPAD 2019 survey suggest that adolescents are shifting their first experiences and experimentation with addictive substances to later in life, we are seeing some new phenomena in use, such as e-cigarettes, etc. The paper aims to investigate the experience of pupils and students with drug prevention activities in selected primary and secondary schools in the context of their experience with addictive substances. The data showed that drug addiction prevention activities are more frequently implemented in the selected primary schools. More than half of the respondents rate the implemented drug addiction prevention as insufficient. One positive finding, however, is that more than half of the respondents are interested in broadening their knowledge about drug issues. The results can serve as a basis for further research in this area.

Keywords:

Drug addiction; children and youth; prevention

Abstrakt:

Výsledky výzkumu ESPAD 2019 sice naznačují, že u dospívajících dochází k odsunu prvních zkušeností a experimentování s návykovými látkami do pozdějšího věku, nicméně zaznamenáváme některé nové fenomény v užívání, jako např. elektronické cigarety aj. Cílem příspěvku je zjistit, jaká je zkušenost žáků a studentů s preventivními aktivitami drogových závislostí na vybraných základních a středních školách v kontextu jejich zkušeností s návykovými látkami. Data ukázala, že prevence drogových závislostí je častěji realizována na vybraných základních školách. Více než polovina respondentů hodnotí realizovanou prevenci v oblasti drogových závislostí jako nedostatečnou. Jedním z pozitivních zjištění je však skutečnost, že více jak polovina dotázaných má zájem rozšířit své znalosti o drogové problematice. Výsledky mohou posloužit zejména jako východisko pro další zkoumání v této oblasti.

Klíčová slova:

Drogová závislost; dětí a mládež; prevence

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Introduction

The prevention of addictive behaviour among children and youth is still a necessary activity that should be given attention at the level of theory and practice. Addiction to addictive substances negatively affects the life not only of the user but also of his/her family and friends. Therefore early and effective prevention activities are a necessary tool to positively influence the life of the individual, especially young people. In the first part of the paper, the theoretical background mapping childhood and adolescence in the context of addictive behaviour is presented, followed by a theoretical definition of addiction with emphasis on the results of the ESPAD 2019 research. The theoretical part also describes the issue of prevention of addictive behaviour. Subsequently, the results of a research investigation are presented that maps the experiences of 9th-grade primary school students and 1st-grade secondary school students with addictive behaviour prevention activities in the context of their experiences with addictive substances.

Theoretical background of childhood and adolescence in relation to risk behavior

This chapter focuses on childhood and adolescence in the context of risk behaviour. The terminological definition of childhood and adolescence is based on the different perspectives of the disciplines. However, only the basic theoretical framework of this issue is presented in the text.

According to Průcha, Mareš, and Walterová (2013), childhood can be characterized as a period that begins at birth and ends with the child's transition into an adolescent (approximately 14–15 years of age). In this life stage, significant physical, intellectual, emotional, and social development occurs. The decisive features of a personality are thus naturally formed. In particular, the child's family, social environment, and school are crucial determinants. Each stage of childhood is characterized by specific features. However, the start of compulsory schooling, when the child takes on the role of pupil, can be considered an important factor in this period. Jandourek (2001) writes that childhood ends biologically with puberty and socially with the possibility to lead one's own responsible life. From the perspective of law, the fifteenth or eighteenth year of an individual's life is a crucial milestone. According to the Convention on the Rights of the Child, "every human being under the age of eighteen years is considered a child unless, under the legal system applicable to the child, majority is attained earlier." (Communication No. 104/1991 Coll., Communication of the Federal Ministry of Foreign Affairs on the Negotiation of the Convention on the Rights of the Child)

It is clear, however, that we must regard the chronological age of each individual with some reserve because each being has different personality predispositions. Even Kraus (2016) writes that the upper limit of childhood is defined differently. From a legal point of view, an individual acquires criminal responsibility at the age of fifteen and thus falls into the category of a juvenile, while the social perspective mainly takes into account the ability to live one's own responsible life.

Adolescence is a period in which an individual searches for his or her own identity. Experimentation itself, especially with alcohol and other drugs, can serve as a means of doing so. A significant part of the adolescent's leisure time is naturally spent with his peers, who undoubtedly have a major influence on him. Adolescents may treat experimentation with addictive substances in a peer group as a form of entertainment.

Even in the face of peer pressure, it is to be expected that the adolescent will join his or her friends in substance use, and the chances of developing a drug addiction naturally increase during this period (Elliott & Place, 2002).

Nielsen Sobotková et al. (2014) add that experimentation with risky behaviours can to some extent be considered a normal part of development. As a rule, it should only be a temporary period that will subside naturally with age. In most cases, there will be no crossing over into criminal activity. This behaviour is purposeful and, in this sense, functional in the life of an adolescent. Risky behaviours (including substance use) help to meet the adolescent's current needs, which may be, for example, an increase in self-esteem or involvement in a peer group. According to the World Health Organization, adolescents are a separate risk group associated with the so-called syndrome of risk behaviour in adolescence (SCHR-D), which includes the following three areas:

- 1. **Substance** abuse,
- 2. Negative phenomena in the psychosocial area,
- 3. Reproductive risk behaviour (Nielsen Sobotková et al., 2014).

Addictive behaviour of children and adolescents in the context of the ESPAD 2019 study results

According to Kudrle (In Kalina et al., 2003), a broader spectrum of causes is involved in the development of alcoholism and other drug addictions. Addiction can develop through the excessive use of an addictive substance as a result of psychological problems, while in other cases genetic, innate dispositions and socio-cultural factors may play a role. The emergence of addiction also depends on specific reactions at the level of a person's neurobiology.

Kumpfer, Trunnell and Whiteside (2003 in Miller, 2011) explain the different components of the bio-psycho-social model of addiction as follows: The biological side is conditioned by genetically determined traits, intrauterine impairments, character or physiological differences. In the context of psychological and social factors, we consider the interactions of a particular individual with his or her family, peers, local community, occupation and social factors. This model allows very well for an individual assessment of a specific addiction condition, as different contributions are attributed to different groups of causes. Therefore it is a comprehensive yet individualised understanding of the specific causes of an individual's addiction. Kalina (In Kalina et al., 2003) adds that in the context of the bio-psycho-social model of addiction, treatment must focus on detoxification, pharmacotherapy and psychosocial therapies.

According to the American Psychiatric Association, an addicted person may experience a growing tolerance to the drug, taking the drug for a longer period of time than the individual intended, withdrawal symptoms, a gradual increase in dosage and neglect of other pleasures and interests that previously gave the user pleasure, spending more time using and procuring the addictive substance, and a long-term effort to reduce and control the intake of the substance. The addicted individual continues to use the substance despite clear evidence of harmful consequences. It should be added that an individual does not need to meet all of these criteria, only three during the last year of a particular user's life are sufficient to identify addiction (Nešpor, 2007).

The European School Study on Alcohol and Other Drugs (ESPAD) is the largest pan-European study on the extent of substance use and other risk behaviours among 15–16 year olds. In 2019, the seventh wave of this study was conducted, mapping measures such as cigarette, e-cigarette and heated tobacco smoking, alcohol consumption, illicit drug use, first experience of drugs and subjective perceived availability of addictive substances. Attention was also paid to the issue of some non-substance addictions. In 2019, 2 778 Czech respondents participated in the survey. The research sample was almost balanced in terms of gender, with boys representing 51.3% and girls 48.7% (Chromynová, Csémy & Mravčík, 2020).

We now present some key findings from the ESPAD 2019 study. Between 2016 and 2019, we see higher rates of e-cigarette use experience. In 2016, 43.7% of respondents had tried an e-cigarette at least once, while in 2019 the number increased to 60.4%. In the case of current use, i.e. use of an e-cigarette within the last month, there was only a slight increase. However, when considering the rate of e-cigarette use in the aggregate nicotine product category, the prevalence of current use remains stable. A total of 54% of respondents had experienced cigarette smoking at least once in their lifetime (Chromynová, Csémy & Mravčík, 2020).

According to the results, 95.1% of the respondents drank alcohol. 45.5% of boys and 38.4% of girls admitted to having consumed alcohol more than 20 times in their lives. Thus, this group can be considered as regular consumers of alcoholic beverages. In the last 30 days, 62.7% of students have consumed alcohol (Chromynová et al., 2020).

A total of 29.3% of respondents reported at least one experience with the use of illegal drugs, the most common being cannabis, i.e. marijuana or hashish. 28.4% of students had tried these substances at least once in their lives. The results show that the use of illicit drugs is balanced in terms of gender. In the case of non-cannabis drugs, the experience of girls is slightly predominant, but the differences in the prevalence of use cannot be considered statistically significant. In the case of the specific type of school studied, the lowest rates of use of non-cannabis substances appeared to be among students in grammar schools. (Chromynová et al., 2020) Lessem et al. (2006 in Miovský et al., 2015) add that the likelihood of illicit drug use increases significantly (almost twofold) for those individuals who have already used marijuana in adolescence, compared to those who have not such experience.

Prevention of addictive behaviour

When designing prevention programmes, it is necessary to take into account all the specific factors that contribute to the development of risky behaviour. Taking these factors into account helps to design a prevention programme that incorporates a greater number of variables. The multifactorial theory of risk behaviour can then serve as a theoretical basis (Miovský et al., 2015).

The Ministry of Education, Youth and Sports (2005 in Miovský et al., 2015) defined 10 principles of effective primary prevention, which include:

1. **Comprehension and combination of multiple strategies**: this includes the influence of family, school, peers, local community and mass media. With regard to the bio-psycho-social model of risk behaviour (including addictive behaviour), we consider multiple causes. Prevention programmes need to take these factors into account and inter-institutional cooperation is also a prerequisite.

- 2. **Continuity of action and systematic planning**: prevention programmes must complement and build on each other. One-off activities are proving to be counterproductive. Unilateral and simplistic information has a negative impact on programme participants and damages the credibility of the prevention activity itself.
- 3. **Targeting and adequacy of information and forms**: prevention activities should be adapted to the specific age, demographic and socio-cultural characteristics of the target group. The level of knowledge about the phenomenon, specific attitudes and the level of risk should also be taken into account. At the same time, the programme should be designed to be sufficiently attractive to the participants to hold their attention
- 4. **Early start**: Preventive action should ideally start as early as pre-school age. There is clear evidence that the earlier prevention starts, the more effective the results. The rule of thumb here is that the younger the target group, the more rigorous the supervision and interviewing of the programme should be.
- 5. **Positive orientation**: this is mainly about promoting a healthy lifestyle, offering positive models and alternatives that are attractive to the target group.
- 6. **Use of the "KAB" model**: Preventive action should not only aim at transmitting information but should also seek to influence the behaviour and attitudes of participants. Examples include training in assertiveness and refusal skills, social communication, and strengthening self-esteem, which can be linked to the ability to resist pressure to engage in risky behaviour, e.g. in a peer group, etc.
- 7. **Use of the peer element, emphasis on interaction and active involvement**: for children and adolescents, their peers are very often more of an authority than parents and teachers themselves, and it is, therefore, appropriate to use this peer pressure in the prevention of risky behaviour. Programme implementers should take on more of an initiator and facilitator role.
- 8. **Denormalisation**: primary prevention programmes aim to create a social climate in which risky behaviour is explicitly rejected. The term "denormalisation" therefore indicates that in the course of prevention activities, the values and norms of the target group are changed so that they do not consider risky behaviour desirable and do not have only a neutral attitude towards it.
- 9. **Promoting protective factors**: prevention programmes should create conditions for socially acceptable activities within a supportive environment that enables children to establish optimal relationships. Primary prevention may also include the offer of other specialised services for possible crisis of the participants.
- 10. **Not using ineffective means**: simply providing health or other information about the risk phenomenon appears to be an ineffective way of carrying out primary prevention. Intimidation, prohibition, exaggeration of the consequences of use, moralising and affective education based only on strong emotions and feelings can be considered ineffective preventive measures.

Course and methodology of the research investigation

The quantitative research investigation aimed to explore pupils' experiences of drug prevention activities in the context of their experiences with addictive substances. According to Hendl and Remr (2017, p. 137), "quantitative research focuses on measuring the assessment of statistical variability and interdependence of variables. One of the main goals of the researcher is to collect highly structured data."

The research problem was formulated as follows:

✓ Prevention of drug addiction of 9th grade primary school pupils and 1st year secondary school pupils in the context of their experience with addictive substances.

In relation to the research problem, the main goal of the research investigation was formulated in this way:

✓ The main goal of the empirical investigation is to find out the experience of pupils with drug prevention activities in selected primary and secondary schools and also to find out their experience with addictive substances.

In the research investigation, an additional sub-goal was set, which was formulated as follows:

✓ The sub-goal is to determine whether more substance abuse experiences occur among students in matriculated or non-matriculated high school.

Subsequently, five research hypotheses were formulated, which according to Gavora (2002) are defined as scientific assumptions based on scientific theory. The hypotheses are conceived in relation to knowledge that is already known about the phenomenon under study or based on the researcher's practical experience.

The hypotheses of this research investigation are formulated as follows:

 Hypothesis 1: More than 75% of the respondents stated that they are sufficiently informed about drug issues.

According to the principles of effective prevention according to Nešpor, Csémy and Pernicová (1999), a prevention programme should include the topic of legal and illegal substances. According to the methodological recommendation of the Ministry of Education and Science dealing with the issue of addictive substances, the school should comply with the following points:

- ✓ "To provide pupils and legal representatives of underage pupils with the necessary relevant information.
- ✓ To provide pupils factual and truthful information about addictive substances in a form that is appropriate to their intellectual and personal development.
- ✓ To prevent pupils from using substances.
- ✓ Include information about the risks of substance use and the prohibition of substance use in all school-related activities in all health education." (Gabrhelík et al., 2010, p. 15–16)

Ideally, even taking into account the schools' efforts to prevent substance use, pupils' knowledge should be 100%, but the risks of pupils missing out on prevention activities or subjective assessment of lack of knowledge must be taken into account. Therefore, a threshold of 75% was set under this hypothesis (Vavříková, 2024).

• Hypothesis 2: More than 50% of respondents consider the prevention provided in the selected schools to be sufficient.

Hypothesis No. 2 was established on the basis of a SWOT analysis that evaluates the situation in the field of primary prevention of risky behaviour for the period of the 2013–2018 strategy. The hypothesis threshold was set at 50% due to the balance of weaknesses and strengths of the implemented primary prevention. (Vavříková, 2024) Strengths include, for example, more stable multi-year funding for prevention of risky behaviour, the existence of regional plans and strategies (also at the national level) or an increasing number of certified programmes. Weaknesses include e.g. lack of interest in risk

behaviour prevention on the part of parents, lack of school psychologists, child psychiatrists and other professionals, lack of support from school principals or downplaying of risk behaviour at the public level.

Hypothesis 3: More respondents have experience of drinking alcohol than smoking cigarettes.

Hypothesis 3 is based on the results of the ESPAD 2019 study. 2 778 respondents participated in the study. Some of the areas addressed in the ESPAD research are the issue of drinking alcohol or the issue of cigarette smoking. It was found that 54% of the respondents have experienced cigarette smoking in their lifetime. In the case of alcohol consumption, up to 95.1% have this experience (Chromynová et al., 2020).

Hypothesis 4: More than 60% of the respondents drank alcohol in the last 30 days.

Hypothesis 4, like hypothesis 3, is based on the ESPAD 2019 study. The results show that 62.7% of the respondents drank alcohol in the last 30 days and therefore the threshold for this hypothesis was set at 60% (Chromynová et al., 2020).

Hypothesis 5: Marijuana is a more frequently used substance by respondents than ecstasy.

According to the ESPAD 2019 study, 28.4% of respondents said they had experience with cannabis substances, while 3.6% admitted to having used ecstasy. In the context of these results, cannabis substances appear to be the most widely used addictive substance (Chromynová et al., 2020).

Research technique and research set

To obtain data, a questionnaire of our own design was used, which was distributed in paper form in selected primary and secondary schools in Hradec Králové. The questionnaire consists of two parts. The first part is devoted to the items that collect basic information about the respondent (gender, year studied). In the next part, 14 closed questions are formulated. For four of them (namely questions 2, 4, 13, 14) it is possible to select multiple answers or to formulate one's own answer. In a footnote, the terms "drug problem" and "K-centre" are introduced to avoid misinterpretations by the respondents. (Vavříková, 2024)

Tables 1 and 2 present the composition of the research population in terms of gender and type of school studied.

Table 1 Research population in terms of gender

Total frequency of respondents	Boys	Girls	Other gender
196	92	99	5

Table 2 Research population in terms of type of school studied

	Primary schools		Secondary schools	
Type of school studied	Elementary school "A"	Elementary school "B"	Matura specialisations	Non- matriculated disciplines
	73	31	49	43

Overview of the main results of the research investigation

According to the results of the survey, 69.4% of respondents believe that they are sufficiently informed about drug issues. There were no significant differences between first year matriculants (74.4%) and non-matriculants (77.6%). 63.5% of 9th grade respondents considered themselves sufficiently informed. The results showed that respondents most often learn about drug problems from television and the Internet (67.3%). The second most frequent source of information is a lecture by a professional in the context of education (psychologist, police officer, etc.) with 57.1%. With a minimal difference, respondents are informed by teachers (45.4%) and parents (44.9%). Friends appear as a source of information in 36.7%. **Based on the data, hypothesis 1 is rejected**. (Vavříková, 2024)

63.8% of the respondents would like a lecture on the topic of "drug issues" and therefore it can be assumed that these respondents would like more information.73.5% of the respondents admitted that they would like a lecture with a former or currently addicted individual. The higher percentage is not surprising; despite the ineffectiveness of these "intimidating" prevention activities, children and adolescents are likely to perceive the experience as an attractive one. (Vavříková, 2024)

68.4% of respondents believe that not enough attention is paid to drug prevention in their school. The lack of drug addiction prevention activities is perceived the most by respondents of the first grade of non-matriculated subjects (83.7%). The lowest frequency was recorded among the ninth grade students of selected primary schools (60.6%). **Based on the data, hypothesis 2 is rejected**. (Vavříková, 2024)

The most frequent preventive activities related to drug addiction (prevention programme from external organisations, lecture, discussion from teachers, projects, etc.) are implemented in the selected primary and secondary schools once a year (43.4%). For pupils of 9th grade, the most frequent implementer of these preventive activities seems to be an external worker/organisation. Students in the first year of matriculation most often have experience with preventive activities implemented by teachers during lessons (e.g. civic education) and classroom lessons (31.25%). For students in the first year of non-matriculation, as with students in the 9th grade of primary schools, the most frequent preventive activities are implemented by an external employee/organisation. (Vavříková, 2024)

The survey also found that 36.2% of respondents had experience of smoking cigarettes. A significant difference can be noticed between matriculated and non-matriculated students. 72.1% of the non-matriculated respondents have experience of smoking cigarettes, while the corresponding figure for matriculated students is 36.7%. The lowest frequency of experience with cigarette smoking can be observed among 9th grade students (21.2%). The survey showed that the respondents' experience with alcohol consumption compared to cigarette smoking is generally higher (70.4%). **Therefore**, **hypothesis 3 was accepted**. The frequency of experience of alcohol consumption in terms of graduating (85.7%) and non-graduating (86%) classes is almost identical. Among the 9th graders of primary school, 56.7% admitted to having experience of drinking alcohol. A total of 41.4% of respondents had drunk alcohol at least once in the last 30 days. **H4 is therefore rejected**. (Vavříková, 2024)

Question 13 asked which specific illicit drug the respondents had experience with. According to the results, the most commonly used substance was marijuana (18.9%). In the case of ecstasy, only 1% of respondents used it. **H5 was therefore accepted**. In the

case of marijuana, the most frequent experience can be noted for 1st year non-matriculated students (46.5%). In the case of 1st year matriculated students, the experience of marijuana use was admitted by 16.3% of respondents. Elementary 9th graders had this experience at 8.7%. However, it should be added that 79.1% of respondents have no experience of using an illegal drug. (Vavříková, 2024)

Conclusion

The paper aimed to find out what is the experience of pupils and students with drug prevention activities in selected primary and secondary schools in the context of their experience with addictive substances. A sub-objective was to find out whether there is more experience of substance abuse among pupils in matriculated or non-matriculated subjects. From the results, it is clear that more than half of the respondents are interested in expanding their knowledge about drug issues. More than half of the respondents believe that not enough attention is paid to drug prevention at school. This fact is perceived most by pupils in the first year of selected non-matriculation courses. The research survey showed that more than a third of respondents have experience of smoking cigarettes. However, this experience significantly exceeds that of 1st year nonmatriculated students. The survey also showed that the respondents' experience of alcohol consumption compared to cigarette smoking is significantly higher. The most commonly used illicit drug by the selected respondents is marijuana. The results show that first year non-matriculated secondary school students generally have more frequent experiences with substance use. Based on the research investigation conducted, the defined objectives can be considered to have been met. It is important to add, however, that the findings should be treated with some caution. These findings cannot be generalized and, based on them, conclusions that would be valid for the selected target groups of our entire society cannot be drawn. The research could be repeated with the same target group (in particular, primary school pupils in Year 9) to see whether their experience of substance abuse generally increases as they move on to secondary school.

References

Elliot, J., & Place, M. (2002). Dítě v nesnázích: prevence, příčiny, terapie. Grada Publishing.

Gabrhelík, R., Orlíková, B., & Šejvl, J. (2010). *Rizikové chování ve školním prostředí* – *rámcový koncept, Příloha č. 1: Název: Návykové látky*. Ministerstvo školství, mládeže a tělovýchovy České republiky.

Gavora, P. (2000). Úvod do pedagogického výzkumu. Paido.

Hendl, J., & Remr, J. (2017). Metody výzkumu a evaluace. Portál.

Chomynová, P., Csémy, L., & Mravčík, V. (2020). Evropská školní studie o alkoholu a jiných drogách (ESPAD) 2019. *Zaostřeno*, *6*(5), 1–20.

Jandourek, J. (2001). Sociologický slovník. Portál.

Kalina, K. (2003). Modely závislosti a přístupy v pomoci uživatelům drog. In K. Kalina (Ed.). *Drogy a drogové závislosti: mezioborový přístup* (s. 91–95). Úřad vlády České republiky.

Kraus, B. (2017). Co ohrožuje dětství na počátku 21. století. In *Acta sociopathologica* (s. 7–18). Gaudeamus.

Kudrle, S. (2003). Úvod do bio-psycho-socio-spirituálního modelu závislosti. In K. Kalina (Ed.). *Drogy a drogové závislosti: mezioborový přístup* (s. 91–95). Úřad vlády České republiky.

Millerová, G. (2011). Adiktologické poradenství. Galén.

Ministerstvo školství, mládeže a tělovýchovy. (2019). *Národní strategie primární prevence rizikového chování dětí a mládeže na období 2019–2027*. https://msmt.gov.cz/uploads/narodni_strategie_primarni_prevence_2019_27.pdf

Miovský, M. (Ed.). (2015). *Prevence rizikového chování ve školství*. Univerzita Karlova v Praze: 1. lékařská fakulta, Klinika adiktologie.

Nešpor, K. (2007). *Návykové chování a závislost*. Portál.

Nešpor, K., Csémy, L., & Pernicová, H. (1999). Zásady efektivní primární prevence. Sportprag.

Nielsen Sobotková, V. (2014). *Rizikové a antisociální chování v adolescenci*. Grada Publishing.

Průcha, J., Walterová, E., & Mareš, J. (2013). *Pedagogický slovník*. Portál.

Sdělení č. 104/1991 Sb. Sdělení federálního ministerstva zahraničních věcí o sjednání Úmluvy o právech dítěte. (1991). https://www.zakonyprolidi.cz/cs/1991-104.

Vavříková, N. (2024). Prevence drogových závislostí u dětí a mládeže. [Bakalářská práce, Univerzita Hradec Králové]. Theses.cz. https://theses.cz/id/vkkkhe/STAG100415.pdf.

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