

# Managing the Effects of Drug Use through Evidence-Based Measures

Paula-Ștefania FRUSINOIU<sup>1</sup>

Anda SAMSON<sup>2</sup>

Cristian-Silviu BĂNACU<sup>3</sup>

## **Abstract**

*There are several causes or factors that contribute to the complex phenomenon of drug use and abuse. The scope and correlations of drug use vary depending on the type of drug, the social environment, the economic and cultural context, as well as the individual traits of the drug user. All these aspects should be taken into account when approaching the phenomenon through a mixture of interventions that include education, raising awareness, treatment and support.*

*Moreover, as drug use is recognised as a dynamic phenomenon, strongly influenced by both individual and external conditions, it is important to address all its forms, in a complementary and multidisciplinary manner. The purpose of the paper is to explore practical applications of drug prevention interventions as methods used in managing the effects of drug use in certain population categories, while emphasising the link between evidence and practice.*

**Keywords:** *drug use, prevention, evidence-based, risk and protective factors, planning*

**JEL classification:** *H51, H52, H53, I12, I18, I20, J18, O21, O22, O32, L65*

**DOI:** 10.24818/RMCI.2024.4.676

## **1. Introduction**

Preventive interventions targeting drug use represent a complex package of activities that approach, in a multidisciplinary manner, non-users, drug users, families and communities, based on thorough background assessments and careful planning. The backbone of these interventions is providing specialized support for better decision-making and for building skills to face the problem of drug use and addiction in an efficient way. In this context, education and awareness play a crucial role. Additionally, in order to be efficient, interventions should be adjusted to the stage of drug use, whether occasional, recreational or addictive. If in early stages, drug use is associated with feeling good, even if on a short term, and with a desire to relieve stress and escape from reality, in later stages, when addiction settles in, behavioural changes appear.

---

<sup>1</sup> Paula Ștefania Frusinoiu, Bucharest Academy of Economic Studies, paula.frusinoiu@gmail.com

<sup>2</sup> Anda Samson, Spiru Haret University, samsonanda@yahoo.com

<sup>3</sup> Cristian-Silviu Bănuțu, Bucharest Academy of Economic Studies, cristian.banacu@man.ase.ro

When it comes to the stage of addiction, interventions and support should take into consideration the changes that drug use generates in the individual, from altered states of consciousness and compulsive needs to continue drug use, in spite of harmful effects, to the inability of the individual to make rational decisions and stay in control of his or her life. In this context, it is important to pay attention not only to the history of drug use but also to the social characteristics of the beneficiaries of prevention interventions, their age, education, family environment, future prospects and expectations, in fact different stakeholders that can have impact (Cristache, et. al, 2019).

Drug accessibility should also be taken into account as one of the most important factors in the dynamics between demand and supply (Ausubel, 2002). For this reason, some interventions focus more on the urban rather than the rural settings and, in urban areas, on those marginal settings where vulnerable categories are affected by drugs. Another factor that plays an important role in drug use onset is a tolerant attitude towards drug use that exists in a cultural environment or in a social, economic or professional class (Georgescu et al., 2007). However, because the personality of the individual remains the determining factor, preventive interventions that build on the assessment of the profile of the drug users, tend to be more successful.

## **2. Evidence-based prevention – observations from literature review**

Drug use prevention represents a package of interventions by which a response is given to the use of drugs, usually before it occurs. This type of anticipatory response is aimed towards reducing the chances that an unwanted harmful event should happen and towards reducing the possibility that secondary harmful events, such as HIV infection or overdose, should occur (Georgescu, op.cit.). From this point of view drug prevention is an attempt to alter present conditions in hope of changing the future. Because there is a great amount of uncertainty in drug prevention, interventions should focus on what is currently known about the drug user and his/her environment. This is something most drug prevention intervention share, that is a three-way approach that includes: *drug control, the drug user and the environment*. Drug control implies the reduction of drug use and drug supply and the drug user is the focus of influence and skill development strategies. The settings in which drug users live are taken into account when trying to build safe environments or limit the availability of other products that act as gateway substances for illicit drug use, such as tobacco or alcohol. This approach is substantiated by research findings showing that drinking alcohol before the age of 11 is likely to cause chronic adult alcoholism or that early cigarette smoking is likely to increase the risk of drug and alcohol abuse.

Extensive research on drug use prevention focusses on the link between drug use and several conditions, which can be *personal, social, economic or family-related* and, generally, precede drug use. While the link between substance use and genetics remains unclear (Alhammad, M., et al., 2022), agreement has been reached

on the consequences of drug abuse and the quality of life, because of the psychological, physical, social, educational, and functional impairments that come along with drug use and abuse.

Based on the analysis of literature review, scholars classified risk and protective factors into several categories, ranging from the individual, the family settings and the community (Nawi, A.M., et al., 2021). As a result, impulsiveness, emotional regulation impairment, history of abuse, depression and the perception that drugs are not harmful are some of the *individual risks* identified. From the category of *family risks*, the negative upbringing or negligence, substance use among family members, and prenatal maternal smoking were frequently mentioned. Additionally, substance use among peers was included in the category of *community risk factors*.

The protective factors identified by scholars refer to strong beliefs against substance abuse, the desire to be healthy, awareness of drug risks in family, a strong connection with school and the inclusion of the individual in structured activities.

## 2.1 Role of risk and protective factors in drug use

Scientific research, which prevention interventions should always rely on, attempts to explain how drug use or abuse is influenced by individual or external factors, and to assess the degree of this influence. As some observations show, despite the increase in formal and informal social pressure, to which different groups of population are subjected, drug abuse evolves differently. Considerable steps have been taken to evidence those precursors of drug use and abuse, which are grouped under the category of risk factors and have counterparts in the category of protective factors. The identification of the risk and protective factors was supported by research findings resulting from population studies and monitoring systems related to drugs, with diverse information emerging based on demography and other specificities. Trend analysis allowed for the identification of the following elements that can be related drug use:

- ✚ identifying the ages of drug use onset for different drug categories;
- ✚ description of multiple factors related to drug use (genetic, biological, emotional, psychological, family, interpersonal, educational, social, community and environmental);
- ✚ identification of precursors, associated to or enabling drug use;
- ✚ correlation between the influence of the factors that enable or lead to drug use, and the risk of abusive behaviours and problem drug use;
- ✚ correlation between the risk of drug use and the stages of life, which involve transitional periods and critical moments when the individual faces personal and social challenges;
- ✚ existence of trends in the use of different psychoactive substances.

In this respect, the National Institute for Drug Abuse shows that the decreasing or increasing trends of drug use go hand in hand with the changes in how young people perceive the harmful effects or the social acceptance of drug use. The

relation was such that when negative perception increased, drug use decreased, and when the perception of the harmful effects of drug use was limited, then drug use increased. These findings tend to contradict a misconception, which is frequent in drug prevention, that the provision of information on the risks associated with drug use could be counter-productive.

Findings from the evaluation of various preventive interventions allowed for the description of factors, whose control or alteration contribute to a significant decrease in drug use, and generate information about the positive or negative factors associated with drug use. Risk factors, construed as circumstances occurring before the initiation of drug use, abuse or problem use, were defined by the US *Committee on Prevention of Mental Disorders* as features or circumstances that increase the probability that a person might develop a behavioural problem, as compared to any other person from the general population, selected randomly.

Other categories of risk factors emerged with new research. As such, different factors were classified into two large groups (Hawkins et al., 1992): (1) *the broad social and cultural factors*, i.e. factors related to legal aspects and social norms regarding drug use, and (2) *the individual and interpersonal factors*. Given that individuals and groups exist and evolve in social contexts, that are marked by society values and structures, the changes in norms, in the perception of certain behaviours and the perception of potential profits generated by drugs have been shown to be associated with changes in drug use behaviour and the prevalence of the use of various psychoactive substances. Some of the most important risk factors are mentioned as follows:

- *Laws and social rules that enable drug use and drug abuse behaviours*

For example, a permitting legislation and high social tolerance towards substance use are included in the category of *key contextual factors* that enable drug use. As seen from practice, measures taken to limit the number of points of sale or the hours of sale, to increase prices, to limit the age of buyers and the public areas where the use of certain substances is allowed, proved to have an important effect on the restriction of drug use.

- *Availability*

This factor is related to legal aspects, but it can also be considered as an independent factor. For example, the fact that a drug is legal or illicit generates greater or lesser availability. The degree of availability for both legal and illegal drugs is an independent risk factor, that can be correlated with other factors, such as the buying power of individuals.

- *Extreme poverty*

Research results support the idea that indicators of social disadvantage, such as poverty, human agglomerations and precarious living conditions, are associated with an increased risk of antisocial behaviours. At the same time, the analysis of the correlations between family conditions and drug use indicates possible relations between parents' higher education, good working conditions, financial resources and a greater use of psychoactive substances among young people. However, social

deprivation can be considered a risk factor for long-term drug abuse, in case of extreme poverty viewed as a source of personal and family problems.

- *Disorganized social environment*

When a population is faced with sudden cultural changes, the family fails to transfer pro-social values to children and adolescents. In this case, the socializing role of the family, neighbourhood or of the social support network is limited and this can lead to problems such as alcohol abuse.

Individual and interpersonal risk factors refer to psychological, family, education and environmental conditions, which are explained briefly below.

- *Physiological factors*

These factors refer to a certain hereditary or biological predisposition (Spooner, C., 1999) towards the abuse of certain psychoactive substances, which is still a reason for debate among researchers, while extensive studies seem to mark a breakthrough that could lead to more effective prevention and treatment strategies (NIDA, 2023) <sup>4</sup>.

- *Psychological factors*

The psychological characteristics associated most frequently with drug use behaviour include a low pain threshold, the incapacity to control emotions, aggressiveness and hostility. However, recent research on the positive associations between pathological drug use and depressive and anxiety disorders in children generates new findings (Klein, R.H., Gyorda, J.A., Jacobson, N.C., 2002), while other studies show that emotional instability seems to be a consequence of drug abuse rather than a cause.

- *Family attitude towards drugs*

When drug use is accepted as a behaviour in the family, it influences how children and adolescents perceive it and their decision to use substances. This positive association between being a part of a family, in which at least one parent is a drug user, and the long-term evolution of substance addiction problems was observed for both legal and illegal drugs.

- *Inconsistent parenting styles and family ties*

Various studies show there is a relation between inconsistent parental roles and family functions and drug abuse problems, especially in children, whose inability to change to suit different conditions translates into attention disorders, irritability and aggressiveness. Additionally, while permissive educational style regarding drug use by children directly influences the onset and continuation of substance use, the absence of parents or guardians capable of providing emotional support to children, can be related to long-term drug abuse behaviours.

- *School failure and low commitment to school*

Low school performance was identified as a predisposing condition in relation to the frequency and intensity of drug use and correlations have been made

---

<sup>4</sup> <https://nida.nih.gov/news-events/news-releases/2023/03/new-nih-study-reveals-shared-genetic-markers-underlying-substance-use-disorders>

between drug abuse and school integration or between drug abuse and the expectation to continue secondary studies.

- *Drug using peers*

Drug use by peers is one of the factors associated with increased likelihood of individual use. In this case, being a part of a drug using group is a two-way relation, in which the group influences the individual and the individual tends to integrate into groups with close similarities. To gain group acceptance, the individual accepts group norms prior to drug use.

- *Early onset of drug use*

Epidemiological studies provide sufficient information to demonstrate that the intensity and frequency of drug use as well as the evolution of addiction-related problems is higher as the age of onset drops.

Many of the mentioned risk factors are difficult to change on the short term. The recognition of limits of the control of risk factors led research to the study of protective factors. **Protective factors** refer to those moderating circumstances of exposure to risk factors. Protective factors are not necessarily opposite to risk factors, but rather two different realities that interact with each other. The main idea in considering protective factors is that there are certain circumstances that can mediate or moderate the effects of the exposure to a risk situation, which, on the long term, means that the vulnerability of the individual to drug-related problems can be reduced. Protective factors strengthen resilience of people who are subject to risk situations and act as shields against problematic circumstances.

Two mechanisms, through which protective factors can contribute to the reduction of the influence of risk factors, were identified as follows (Brook et al., 1990):

- i. *Risk - protective mechanisms*, through which exposure to risk factors is moderated by the presence of protection factors. For example, strong pro-normative affective bonds can moderate the existence of drug use among peers;

- ii. *Protective mechanisms - protection*, by which a protective factor enhances another protective factor, in an ambivalent relation. For example, a positive affective bond between parents and children enhances the effect of other protection factors, such as the parents' common stance on drug-related issues.

From the category of *individual protective factors* we mention *problem solving* and *internalized norms*. While the first indicates the ability of the child or adolescent to solve problems, the internalization of norms indicates the capacity of the individual to adopt normative beliefs, which places the individual in relation to social change.

Additionally, strong emotional connections between parents and children, participation of parents in children's lives, consistent parenting rules are some of the most important factors included in the category of *family protective factors*. Educational settings are important not only as a flexible and suitable environment for interventions dedicated to children, teenagers and young people, but also as protective factors against drug use. In this respect, a good school performance and a good connection with education and teachers, play a protective role. On the other

hand, school dropout is one of the factors that can be correlated with the onset of drug use or with drug abuse.

Protective factors are also generated by small communities and the society as a whole. The availability of a supportive social environment, which reinforces positive values and strengthens one's ability to face the challenges of society changes, play the role of *contextual protective factors*. Additionally, having strong ties with institutions that have a social role, such as *family, school or church*, and actively participating in the activities of these institutions, contribute to the value system of the individual and his/her resilience to drugs.

To conclude, risk and protection factors of drug use include mediators and modifiers that can be biogenetic, psychological, behavioural, social or environmental. Both risk and protection factors can be presented at different levels of intensity, based on how they associate with psychological, physical or behavioural disorders that drug abuse entails, which is why it is important to clarify, by research, the nature or intensity of the correlates between factors and results, as well as the manner in which the interaction of these factors trigger the drug use behaviour. Individual differences and group membership should be taken into account when analysing factors and planning prevention interventions. Additionally, preventive measures should be adjusted to the stages of life a person is in, bearing in mind the intensity of the transition from one life stage to another.

### **3. Discussion on the link between evidence and drug use prevention interventions**

Drug use is a dynamic phenomenon, strongly influenced by a multitude of social, economic and cultural factors. This complex phenomenon is constantly characterized by new forms of manifestation that require approaches from several stakeholders. The central point of these interventions is the provision of specialized support to teenagers and young people, in order to build the capacity to make correct decisions for themselves and those around them. Scholars indicate, however, that the most effective interventions focus on risk and protective factors, and are guided by relevant theories on the etiology of substance use and abuse (Griffin., K.W., Botvin, G.J., 2010).

The prevention of illicit drug use is a *concept* that sums up all the activities that are carried out with the aim of delaying or avoiding the onset of drug use and the transition to a high-risk drug use pattern. The measures to prevent illicit drug use consist of: information, education, communication, awareness, and building skills, and are usually carried out within organised frameworks of programs or projects designed according to quality standards. The following basic principles should be applied when planning drug prevention interventions: (i) *correlation with the needs and the size of the problem*; (ii) *compliance with methodological requirements on planning, implementation and evaluation*; (iii) *significant theoretical basis*.

A systematic review carried out, together with an inventory of best practices (Nemeş, R., et al., 2013), showed that the backbone of the drug prevention strategies

consists in actions targeting school, workplace, the individual, families, and the entire community. It concluded that the basic approach takes into consideration the reduction of the impact of risk factors and the enhancement of protection factors. Based on this systematic data review, by searches in international data bases and applying inclusion and exclusion criteria, scholars tried to identify best practices in education and in *universal, selective and indicative prevention programmes*, carried out in the US and European countries. The classification by target was in line with the recommendations of the European Monitoring Centre for Drugs and Drug Addiction, according to which *universal prevention* focusses on the community while *selective* and *indicated prevention* focus on the risk (EMCDDA, 2009). This classification was also in line with the distinction made decades ago by the National Advisory Mental Health Council Workgroup on Mental Disorders.

It was recognised that for school-based drug prevention programmes there is significant evidence, which is why most interventions take place in schools and are based, content wise, by a range of models. While *selective prevention* builds on the idea that vulnerable groups can be identified by social and demographic characteristics, interventions focus on reducing the risk of drug use, and the most successful ones focus on the family or are a combination between the two categories of drug prevention. *Indicated prevention* is aimed at preventing abuse among people who already use drugs and who engage in high-risk behaviours. In the mentioned research, prevention work was classified by the *levels of resilience* it generates at individual levels, at family level and at community level.

Researchers concluded that *school-based prevention* focuses on children's social and academic skills, on peer relations, coping and refusal skills, and self-control, while *community-based prevention* encourages the involvement of governmental and non-governmental organizations to strengthen pro-social behaviours. The involvement of parents in the lives of their children, through communication, guidance and consistent rules, was identified as a factor that could help reduce the risk of drug use onset.

Recent research has been challenging what was once known about the classes of prevention interventions, arguing that, due to its methods, *tertiary prevention* is not a type of prevention among people who have already used substances and are facing consequences due to their use, but, rather, represents treatment and harm reduction (Flora, K. A, 2022). Irrespective of the different distinctions made in the classes of drug prevention interventions, it is largely recognised that prevention, *as a concept*, includes policies, designs, methods, and interventions, which rely both on theory and practice (Flora, op. cit.). Maybe one of the most accurate examples of the recognition of the link between prevention and evidence was given this year, on the *International Day against drug abuse and illicit trafficking*, which has been continuously marked on the 26<sup>th</sup> of June, since 1987. The theme chosen for the year 2024: "*The evidence is clear: invest in prevention*" was saluted by relevant European fora (Pompidou group, 2024)<sup>5</sup>, that took the opportunity to emphasise what has been done and what will follow in the field of prevention. Choosing a theme to mark the international day against drug abuse has

---

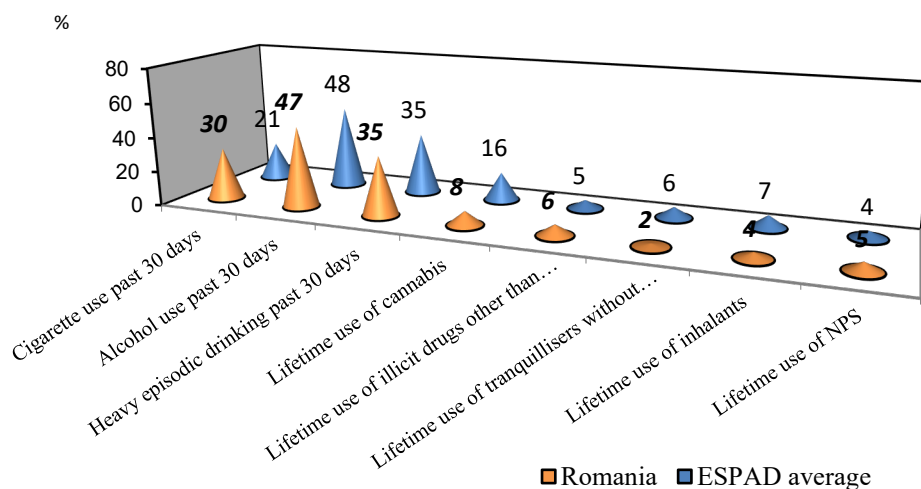
<sup>5</sup> <https://www.coe.int/en/web/pompidou/-/statement-by-the-italian-presidency-on-the-occasion-of-the-international-drug-day-26-june-2024->



become a global mechanism inviting all states, that are committed to drug use prevention and treatment, to plan and implement activities in the field, and raise the awareness of the population on drug-related issues. While some fora stressed the role of multidisciplinary and multistakeholder approach, at all administrative levels, in developing effective prevention strategies, others used it as an opportunity to launch relevant publications such as the World Drug Report for 2024 or prevention tool kits. It was an opportunity for governments to stress once more the importance of life skill competences in all prevention interventions and the role of data and evidence in the design of efficient responses. Due to its reverberations at global level, this is a clear example of how concepts can be transferred from theory into practice.

#### 4. Applications of evidence-based prevention at national level

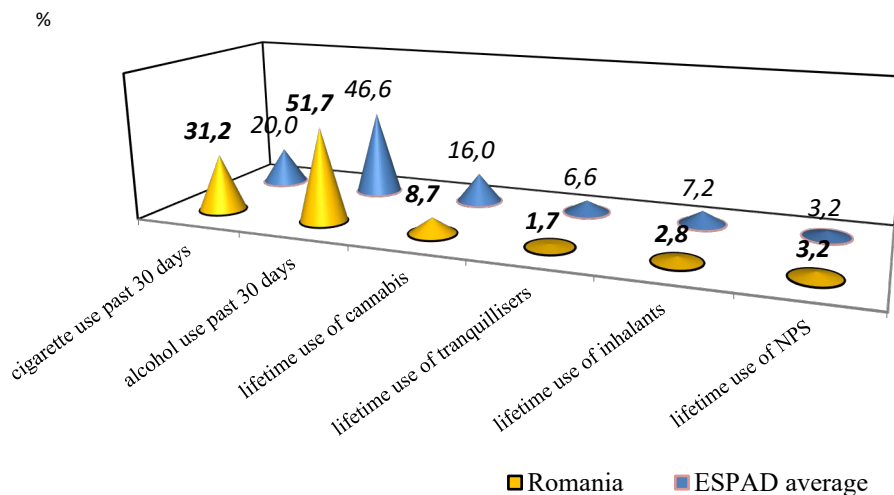
Teenage is a life stage in which there is great vulnerability towards the onset of drug use. If in pre-teenage years the number of students exposed to or who have used drugs is low, teenagers go through a stage in life where they assert independence, experiment with decision-making and challenge parenting rules (SDERA, 2018). Relevant for the study of the alcohol and drug using behaviour of 15- to 16-year-olds is the *European School Survey Project on Alcohol and Other Drugs* (www.espad.org). This expanding survey, that takes place every four year, represents the joint effort of several research teams in more than 40 European countries and the largest cross-national research project. Because of its expanding research basis, the survey allows for comparisons which place our country in the larger European context. For example, the following figure shows comparisons between the unweighted ESPAD average and Romanian findings based on eight selected key variables by country.



**Figure 1: Comparison between ESPAD average and the Romanian ESPAD average (2015)**

Source: The 2015 ESPAD Report, available at: <http://www.espad.org/report/home>

Data referring to last year drug use and last month drug use are relevant for planning specific interventions, while life-time prevalence of drug use shows the general picture of the interest of the population towards drugs and their availability on the illicit market. Trend analysis helps practitioners follow the evolution of the phenomenon and gives a starting point on the evaluation of the impact of prevention interventions. As such, having in mind similar key variables, comparisons can be made from one survey to another, as shown below:



**Figure 2: Comparison between ESPAD average and the Romanian ESPAD average (2019)**

Source: ESPAD Report 2019, National Anti-drug Agency: Romanian ESPAD 2019

The conclusions of the survey indicate that cannabis continues to be the drug which is most frequently used among teenagers, followed by the new psychoactive substances. In terms of trends, there are slight increases for lifetime cannabis use and decreases for lifetime use of inhalants, amphetamines, cocaine, injecting drugs, heroin, mushrooms, LSD, ecstasy, GHB and sedatives. Additionally, the use of pain relievers to change one's mood, which is higher than the European average should be taken into consideration when planning and implementing interventions. However, the finding that most teenagers reported early drug onset around the age of 13 or even earlier (NAA, 2019), raises concerns and urges stakeholders to take measures that are specifically designed for this vulnerable population.

Another aspect that should be taken into account when planning and designing interventions is the valuable resource of the *lessons learned*, which is included in handbooks to guide practitioners in their work. As such, practitioners should keep in mind what is feasible and can be used, as well as what was already implemented and generated low results or was counter-productive. As the European guidelines on the prevention subject show (EMCDDA, 2019), in the school environment, for example, interactive methods, structured lessons delivered in work

groups, by trained staff, and broken down into weekly sessions are some of the successful methods that were verified in practice. On the other hand, reading the information, having spontaneous discussions, and the sole use of fliers, are considered to be less effective.

Additionally, the content should focus on communication, problem solving and decision making, self-efficacy, resilience and coping and should be accompanied by a positive attitude towards learning and education. However, the sole delivery of rigid information, random drug testing, showing testimonials and films that are meant to induce fear by exaggeration, are some of the aspects that proved to be ineffective, as shown either by European guidelines or by practical experience.

Preventive activities should be, on one hand, evidence-based and, on the other hand, should be flexible enough to allow for the implementation of interventions *when* and *where* they are needed. Otherwise, prevention becomes inefficient, both in approach and the use of resources. Taking the example of school-based drug prevention, distinction should be made between different types of education units and the message should be adjusted according to both demographic specificities and the history of drug use cases. Therefore, in those units where there were no cases of drug use reported, drug use prevention should focus on the reduction of risk behaviour, while in schools with a history of drug use cases, prevention should focus on discussing the stages of addiction, and the effects of drug use, including physical, emotional and legal.

Additionally, preventive interventions should be doubled by intensive training. This is an important aspect, emphasised also by European fora, that stated that "the professionalisation of the prevention workforce" is a component of the effectiveness of prevention efforts (EUDA, 2023). To this aim, prevention activities should be enhanced by trainings, that are adjusted to the needs of all responsible stakeholders: educators, parents, professionals working with target groups, law enforcement, judicial specialists, staff working in responsible authorities.

## Conclusions

Scholars and practitioners agree that significant progress has been reached in the field of drug prevention and in building a better knowledge base for evidence-based prevention programmes. However, further steps should be taken at national level to ensure the quality of prevention interventions as well as to measure the effects and impact of prevention activities.

To this aim, quality insurance systems referring to preventive interventions should be formulated and endorsed by formal regulations, so as to ensure that the right message and the right intervention are directed to the right people. In building quality insurance mechanisms at both central and local levels, evidence rooted in scientific research and the experience of practitioners is essential.

Additionally, bearing in mind that at EU level, only a small percentage of professionals that are working in the area of prevention, received evidence-based

training or education, nations should contribute to building a network of drug prevention professionals by committing to the provision of quality training.

## References

1. Alhammad. M., Aljedani. R., Alsaleh. M., Atyia. N., Alsmakh. M., Alfaraj. A., Alkhunaizi. A., Alwabari. J., Alzaidi. M., *Family, Individual, and Other Risk Factors Contributing to Risk of Substance Abuse in Young Adults: A Narrative Review* in *Cureus*. 2022 Dec 8;14(12): e32316. doi: 10.7759/cureus.32316. PMID: 36505959; PMCID: PMC9731175.
2. Ausubel., D. P., *Theory and Problems of Adolescent Development* (3rd ed., p. 102). Printing House: Lincoln, NY, Shanghai, Writers Club Press, 2002.
3. Brook, J.S., Brook, D.W., Gordon, A.S., Whiteman, M., Cohen, P., The psychological etiology of adolescent drug use. A family interactional approach. 1990. In *Genetics, Social Gender and Psychology Monograph*, 116 (Whole no.2).
4. Cristache, N., Năstase, M., Petrariu, R., & Florescu, M. (2019). Analysis of congruency effects of corporate responsibility code implementation on corporate sustainability in bio-economy. *Amfiteatru Economic*, 21(52), 536-553.
5. Department of Education WA, Road Safety and Drug Education Branch. Statewide Services Centre, Australia. 2018. *Considerations for teaching alcohol and other drugs education*.
6. European Monitoring Centre for Drugs and Drug Addiction, *Preventing later substance use disorders in at-risk children and adolescents*. 2009. ISBN 978-92-9166-308-6. ISSN 1725-5767, DOI 10.2810/50435. Available at: <https://op.europa.eu/en/publication-detail/-/publication/6e8921c2-d538-4562-993b-1e9d1de815c9/language-en>
7. European Monitoring Centre for Drugs and Drug Addiction, *European prevention Curriculum- A handbook for decision-makers, opinion-makers and policy-makers in science-based prevention of substance use*. ISBN:978-92-9497-416-7, ISSN:1606-1705, Pub. DOI:10.2810/852697. 2019. Available at: [https://www.euda.europa.eu/publications/manuals/european-prevention-curriculum\\_en](https://www.euda.europa.eu/publications/manuals/european-prevention-curriculum_en)
8. Flora, K. A, *Review of the Prevention of Drug Addiction: Specific Interventions, Effectiveness, and Important Topics*. *Addict Health*. 2022 Oct;14(4):288-295. doi: 10.34172/ahj.2022.1348. Epub 2022 Oct 29. PMID: 37559791; PMCID: PMC10408746.
9. Georgescu, D., Moldovan, A.M., Cicu, G., Scientific coord. Abraham, P. *Ghid de prevenire a consumului de droguri în rândul adolescenților și tinerilor*. Detectiv Printing house, Bucharest, 2007. pp. 47-52.
10. Griffin, K.W., Botvin, G.J., Evidence-based interventions for preventing substance use disorders in adolescents. *Child Adolesc Psychiatr Clin N Am*. 2010 Jul;19(3):505-26. doi: 10.1016/j.chc.2010.03.005. PMID: 20682218; PMCID: PMC2916744.
11. Hawkings, D., Catalano, R.F., Miller, J.Y., Risk and Protective Factors for Alcohol and other Drug Problems in *Adolescence and Early Adulthood: Implications for Substance Abuse Prevention*. In *Psychological Bulletin*. 1992. Vol. 112. No. 1. pp. 64-105.
12. Klein, R.J., Gyorda, J.A., Jacobson, N.C., *Anxiety, depression, and substance experimentation in childhood*. *PLoS One*. 2022 May 24;17(5): e0265239. doi: 10.1371/journal.pone.0265239. PMID: 35609016; PMCID: PMC9129013.

13. National Advisory Mental Health Council Workgroup on Mental Disorders. *Priorities for Prevention Research at NIMH*. In NIH publication volume no. 98-4321. Washington, DC: National Institute of Mental Health (NIMH).1998.
14. National Anti-drug Agency, School survey on alcohol, tobacco and illicit use in Romania. ESPAD 2019. 2019. Available at: [https://ana.gov.ro/wp-content/uploads/2020/11/ESPAD-2019\\_3.pdf](https://ana.gov.ro/wp-content/uploads/2020/11/ESPAD-2019_3.pdf)
15. Nawi, A.M., Ismail, R., Ibrahim, F. et al. *Risk and protective factors of drug abuse among adolescents: a systematic review*. BMC Public Health 21, 2088 (2021). <https://doi.org/10.1186/s12889-021-11906-2>
16. Nemeş, R., Deleanu, O., Nedelcu, R., Ulmeanu, R., Mihălţan, F., *A systematic review on interventions for prevention of drug use among young people*. In Mihălţan. F. et al., *Developing prevention, care and rehabilitation for drug users in Romania: recommendations based on systematic literature review and search for good practice*. ISBN 978-606-8595-01-6. Aramis Printing House, Sibiu, 2013.
17. Spooner, C., *Causes and correlates of adolescent drug abuse and implications for treatment*, in Drug and Alcohol Review. 1999, pp. 453 -475