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An analysis of socially accepted addictive behaviors among adolescents

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ABSTRACT

Adolescence is a critical period characterized by an increased propensity for risk taking behaviors, including socially accepted addictive behaviors such as alcohol consumption, smoking, excessive Internet use, gambling, and video games. Although these behaviors are often perceived as normal or transient, they can have a significant impact on cognitive, emotional, and social development. Addictive behaviors among adolescents are a major public health concern with significant implications for their development and well-being. Socially accepted addictions, such as alcohol, tobacco, and excessive technology use, are often underestimated in terms of their negative impact. This article examines the factors that contribute to the initiation and maintenance of these addictive behaviors, including individual, family, and social influences. Long-term consequences, such as deterioration in physical and mental health, academic decline, and social dysfunction, are also examined. This paper aims to highlight the impact of substance use on personality structure and dynamics, analyzing the correlation between substance use and the risks associated with addictive behavior. To rigorously substantiate the results obtained from this study, a systematic literature review methodology was adopted, involving the critical evaluation of 58 relevant scientific articles published between 2017 and 2022. The synthesized results highlight the need to develop effective prevention and intervention measures based on education, active parental involvement, and community support.

Keywords: addiction in adolescents, socially accepted behaviors, risk factors, prevention strategies, impact on health

INTRODUCTION

The constant increase in the prevalence of substance use among adolescents, as well as the rate of addiction associated with this phenomenon, amplifies the relevance of the study. The choice of this research topic is justified by the topicality and magnitude of the problem, substance use becoming a rapidly expanding phenomenon, not only among adolescents, but also within other segments of the population.

This alarming trend highlights the need for rigorous scientific approaches that contribute to understanding the psychological and social mechanisms involved in this process. Although there are misconceptions that only individuals from socioeconomically advantaged backgrounds are prone to drug use, studies demonstrate that this phenomenon transcends social, economic, gender, or intellectual barriers. Substance-induced addiction is a universal process, affecting individuals regardless of their origin.

The fundamental difference between users and non-users lies in the ability to self-regulate and resist temptation. Although the decision to consume a substance or not remains an individual choice, it is essential to be aware of the long-term consequences of physical, mental, and social health.

Being a defining stage in the development of the individual, characterized by profound transformations in emotional, cognitive, and social terms, processes that contribute to the crystallization of identity and behavior of the future adult, adolescence is marked by the exploration of identity and the assumption of risks.

In this context, certain addictive behaviors, such as alcohol consumption, smoking, gambling, or excessive use of the Internet and video games, are often socially tolerated or even encouraged. The increased degree of independence and reduced parental supervision during this period may favor the assumption of risky behaviors, including substance use. Although considered transient or non-serious phenomena, these behavioral patterns are associated with an increased risk of deterioration in physical and mental health among adolescents, with a demonstrable negative impact on academic performance and the quality of social relationships [1 , 2].

Specialized literature emphasizes that such manifestations can contribute to the development of psychiatric disorders, decreased school motivation, and altered social support networks [3, 4].

In this sense, we emphasize that adolescence represents a defining stage for the acquisition of a lifestyle, and behavioral

patterns acquired in childhood are consolidated during this period [5, 6].

The spectrum of substances with addictive potential is extremely wide, including both commercially available products (organic solvents, varnishes, paints, tobacco, caffeine) and substances with pharmaceutical use (psychotropic drugs, sedatives, and opioid analgesics).

It is estimated that approximately 25% of young adults in the European Union, representing over 80 million people, have reported using illegal substances at least once in their lifetime, underlining the alarming scale of this phenomenon on a global scale [7, 8].

Current studies highlight that the prevalence of drug use among young people continues to increase, reflecting changes in cultural trends, accessibility, and perception of associated risks, but also with significant social and economic implications [9, 10].

Early onset of substance use, such as alcohol and tobacco, is associated with an increased risk of developing addiction in adulthood, and excessive use of the Internet and digital games can lead to problems such as depression, anxiety, and difficulties in social relationships [11, 12].

The factors that contribute to the adoption of these behaviors are multiple and interconnected. Personality traits, such as impulsivity and sensation seeking, have been correlated with an increased predisposition to substance use. Family and social influences increase the prevalence of adolescents' exposure to permissive models of alcohol and tobacco use, putting them at greater risk of developing addictive behaviors.

Within this scientific approach, the research was articulated around a coherent set of objectives, aiming at a thorough understanding of addictive behaviors manifested during adolescence, as well as their implications on the biopsychosocial development of the individual as follows:

1. Analysis of addictive behaviors specific to adolescence, such as alcohol and tobacco consumption, gambling, and problematic use of technology, in the context of the increased tendency to take risks during this stage of development.
2. Evaluating the impact of these behaviors on the physical and mental health, school performance, and the quality of social relationships of adolescents.
3. Investigating the psychological and social factors involved in the initiation and perpetuation of addictive behaviors, with an emphasis on individual traits, family dynamics, and sociocultural influences, including erroneous perceptions regarding consumption.
4. Exploring the role of self-regulation and awareness of the consequences of consumption in preventing addiction, as well as substantiating the need for educational and therapeutic interventions adapted to the realities of the current generation.

Prerequisites for Understanding Addictive Behavior in Adolescents

Behaviors that emerge during adolescence, stimulated by age-specific hormonal development, can be considered a strategy for a brutal transition to adulthood. This aspect is amplified by the prematurity of impulsivity to develop addictive vices without considering the multifactorial individual context. Sometimes, the social and family context, genetic inheritance, and abilities do not describe the behaviors adopted by young people during adolescence. Early onset is a primary risk factor, especially for girls, where puberty sets in about 2 years earlier than in boys over the last century, with the onset of puberty decreasing on average by about 3 years [13].

Early use of substance abuse is associated with the highest risk of developing addictive behaviors. Positive examples that can successfully counterbalance this are, for example, musical or foreign language addiction, favored by the high plasticity of the brain [13].

Repeated stimulation of a neural circuit during a critical period of development causes lasting changes in its reactivity to environmental factors, so that exposure to psychoactive substances during such sensitive intervals can induce significant neuroplastic effects, influencing the processes of maturation and neuronal organization in the long term.

The human brain develops until the age of 26. In adolescents, the frontal cortex is especially underdeveloped in adolescents, namely that area of the brain that plans for the future, takes precautions, and develops reward patterns.

Sensitive Periods for the Induction of Addictive Behavior in Adolescents

Anatomically, the prefrontal cortex does not mature until late adolescence or adulthood [13]. Scientific evidence converges on the hypothesis that the use of psychoactive substances, such as marijuana and cocaine, is associated with significant microstructural alterations of white matter, reflected by reduced fractional anisotropy and impaired coherence of neuronal fiber tracts, correlated with increased impulsivity and deficits in cognitive control. In particular, early-onset marijuana use is strongly associated with a decrease in white matter integrity at the level of the corpus callosum, suggesting an accentuated neurobiological vulnerability, likely to induce persistent structural changes in brain architecture and executive function [14].

Other studies highlight the essential role of cue-induced activation in regions of the prefrontal cortex in processing alcohol-related stimuli, which may contribute to the increased risk of relapse among abstinent alcoholics. The results suggest that these neurofunctional changes, rather than conscious craving, influence vulnerability to relapse, highlighting the importance of using functional imaging to identify patients at high risk and to develop personalized therapeutic strategies [15].

Recent findings from structural magnetic resonance imaging have challenged traditional views of the early termination of neural development, revealing a significant reduction in cortical volume, including in the prefrontal cortex, between the ages of 11 and 22. This neuronal remodeling, characterized by reorganization of excitatory and inhibitory circuits and reduced synaptic density, indicates an increased vulnerability of adolescents to environmental influences, including exposure to drugs of abuse [16].

Studies in animal models, such as rats, have confirmed these phenomena, demonstrating a sex- dependent reduction in the number of neurons in the medial prefrontal cortex, which highlights the complexity of the neurobiological mechanisms involved in cortical maturation and their impact on behavior and susceptibility to addictions [17].

The analysis of the specialized literature reveals the existence of a significant association between emotional instability and increased susceptibility to the manifestation of addictive behaviors among adolescents [18, 19].

Empirical evidence suggests that affective variability and deficits in emotion regulation are major predictors of the initiation and maintenance of substance use, as well as other addictive behavioral patterns [20, 21].

According to statistics carried out by the European Drug Report (2024), 10% of 12-year-olds, 50% of 15-year-olds, and 70% of 18-year-olds have tried alcohol, and half of 18-year-olds have tried other illegal drugs [20].

A young person's developing brain can be physically altered for life as a result of addictive behavior.

Types of Socially Acceptable Addictive Behaviors and Their Associated Consequences Alcohol Consumption

Alcohol consumption is widespread among adolescents and is often considered a socially acceptable practice. Its effects include reduced inhibitions and impaired judgment, which can lead to risky behaviors such as unprotected sex, drunk driving, and involvement in violent situations. In the long term, excessive consumption can lead to cognitive impairment, sexually transmitted diseases, liver disease, and addiction.

A study was done on a sample of 688 Romanian adolescents, who completed a series of standardized instruments, including a questionnaire designed to assess current risk for alcohol abuse that was analyzed using the neuroticism scale from the big five inventory and the specific subscale (health/safety) from the risk behaviors scale [21]. The results revealed a significant positive association between the risk of alcohol abuse and emotional instability, as well as between the risk of alcohol abuse and the predisposition to engage in risky behaviors [22].

Of the 688 adolescents surveyed, aged 15 to 19, 53.3% were boys and 46.7% were girls, with a balanced distribution between urban (463) and rural (225) environments.

At the European level, OECD data indicate an average rate of 37.4% of heavy episodic drinking (defined as ≥ 5 drinks/occasion) among 15-16 year olds, double that of adults (18.7%) [23].

Romania stands out for its significant decreases in this indicator, contradicting trends in countries like Denmark (59%) or Germany. Four Nordic countries (Iceland, Norway, Sweden, and Finland) have rates below 10%, thanks to integrated prevention policies [24]. If, in terms of comparison with Europe, our country is below the average percentage of alcohol consumption among adolescents, compared to the USA it is above the average percentage of consumption because young people in the USA abstain from the consumption of alcohol, marijuana and tobacco, but there are exceptions in certain geographical areas where the upper limit is exceeded [25]. In 2019, 24% of USA teens reported drinking alcohol in the past 30 days [26].

Nicotine and E-Cigarette Addiction Among Adolescents

Media reports of the rise in cigarette use among young people have raised concerns about the risk of a new generation of nicotine addicts who could easily switch to traditional smoking. Recent international studies, such as the one conducted in New Zealand, indicate an increase in e-cigarette use, particularly among young people, which may suggest a substitution behavior for cigarette smoking [25].

Public health authorities in England have validated nicotine e-cigarettes as an alternative to reduce the harmful effects of smoking, noting a rapid decline in smoking prevalence among adults, without recording an epidemic of their use among adolescents [26]. In Romania, the phenomenon could evolve similarly, given global trends and the increased exposure of younger generations to vaping products. A recent analysis demonstrated that e-cigarette use among young people was associated with increased odds of later cigarette smoking after adjusting for behavioral, demographic, and psychosocial risk factors [27]. This is particularly concerning given that adolescents are using e-cigarettes at alarmingly high rates, with one-third of adolescents who use e-cigarettes reporting using them on at least 20 out of 30 days [28]. Careful monitoring of this behavior is also needed to assess the potential long-term public health consequences and the risks of nicotine addiction.

Recreational Drug Addiction

A commonly used and often perceived harmless drug is cannabis. A commonly used drug that is often perceived as harmless is cannabis. The legalization of cannabis, the increasingly permissive attitudes of adolescents towards cannabis, and the level of use among adolescents make it important to understand how the reasons for cannabis use in adolescents are related to the frequency of use and the negative consequences [29]. Although its social acceptance is increasing, regular consumption in adolescence is associated with cognitive impairment, difficulty concentrating, decreased academic performance, and an increased risk of developing psychiatric conditions, such as depression and anxiety [29]. In addition, inhalants–such as organic solvents from paints, adhesives, and sprays–are used by adolescents in vulnerable settings because of their accessibility. They produce short-term euphoric effects but can cause irreversible brain damage, heart damage, and acute respiratory failure. Tobacco and cannabis use among high school students in the USA is high and has many potential long-term implications, signaling a problem related to emotional stability [30].

Regarding the use of cannabis by adolescents in Romania compared to those in the European Union, it is lower than in Italy, where 20.9% of adolescents have used cannabis in the last year, compared to 6% in Romania. Cannabis ranks first in substance use among young people both in Romania and in Europe [7].

Teenage Gambling Addiction

Even though various gambling activities are illegal for under-18s in many countries, gambling is a popular activity among teenagers and adults in developing countries around the world and beyond [31]. As a result, the habit of gambling among young people and adolescents is a growing international concern [32]. Studies of the prevalence of gambling addiction among adolescents vary significantly, but research suggests a worrying trend. According to one study in the USA, approximately 4% of adolescents between the ages of 14 and 18 have been diagnosed with gambling addiction [33]. Research from Europe indicates a higher prevalence among boys, who are more likely to participate in gambling compared to girls [34].

Teens who develop gambling addiction may experience anxiety, depression, stress, isolation, and feelings of guilt. In addition, school performance is poor, and they may develop a distorted perception of reality, viewing gambling as a quick fix for financial or emotional problems [35].

Internet Addiction

Regarding global internet penetration, significant usage rates are reported, ranging from 74% in the USA to 93% in Japan [36-38]. Although widespread access to the Internet offers considerable benefits in various areas, its proliferation can foster the emergence of excessive behaviors and even addiction. Thus, personality traits such as impulsiveness, narcissism, and aggression are often exacerbated by interactions in the digital environment [39, 40].

The Internet addiction has been conceptualized as a disorder characterized by excessive preoccupation, impulsiveness, and difficulty controlling its use, leading to significant dysfunction in daily life [41]. The inclusion of the Internet gaming disorder in the DSM-5 [41] has strengthened the recognition of this issue as a distinct psychiatric condition, defined by a clear set of diagnostic criteria, including excessive preoccupation, withdrawal symptoms, and impairment in social and occupational functioning. The scientific community continues to develop standardized psychometric instruments for the assessment of both the Internet gaming disorder and generalized the Internet addiction, thus facilitating early identification and intervention in the case of these behavioral dysfunctions.

The results of the studies revealed that adolescents with the Internet addiction present significantly pronounced symptoms of ADHD, depression, social phobia, and hostility. In the case of male adolescents, ADHD symptoms, depression and hostility are associated with the Internet addiction, while in female adolescents, the Internet addiction is associated only with ADHD symptoms and depression; thus, these findings suggest that the Internet addiction is correlated with ADHD and depressive disorders, and hostility is an associated factor only in boys, emphasizing the need for appropriate assessment and treatment for ADHD and depression, as well as increased attention for male adolescents with increased hostility in the Internet addiction interventions [42-44].

Risk Factors in the Development of Addictive Behaviors

Adolescence is a period characterized by the search for new experiences and risk-taking behaviors that can predispose to the initiation of substance use or other types of addictions. The risk factors that lead to the development of unhealthy addictive behaviors among adolescents are multiple, acting individually or synergistically.

Psychological factors

Adolescents who exhibit personality traits such as impulsivity, neocriticality, and a tendency to seek out thrills are more at risk of developing addictive gambling behaviors [45].

Gambling is correlated with other addictive behaviors, such as alcohol and drug abuse, psychiatric disorders such as major depression, bipolar disorder, and antisocial personality disorder, as well as major risks such as suicide, attempted suicide, and criminality, including prostitution, theft, and drug trafficking [46].

Various studies suggest that gambling may contribute to the worsening of mental health problems, but at the same time, it is difficult to determine whether gambling is the cause of such problems or whether people with pre-existing mental health conditions resort to this behavior to cope with their emotional circumstances. Similar to other psychoactive substances, these relationships are likely influenced by the dose of gambling, that is, the frequency and intensity of exposure to gambling. A personality trait that has not been extensively explored is self-direction. Individuals with low self-direction are characterized by diminished self-esteem, reduced satisfaction with their personalities, and significant difficulties in managing daily activities.

Individual factors

Age-specific curiosity, a desire to experience new sensations, and a tendency to imitate behaviors observed in the social environment. Also, the onset of puberty at a younger age has been associated with an increased likelihood of initiating substance use. The theme of curiosity and experimentation is supported in [47], which noted the appeal of flavored e-cigarettes and the role of product design in attracting young users [47]. The relationship between personality traits and the Internet addiction is complex, and research suggests that it is shaped by both genetic factors and environmental influences [48]. Regarding cannabis consumption, it can be explained through the incentive motivation model also used in the case of alcohol consumption, which involves four fundamental dimensions: enhancement, coping mechanisms, social motivations, and compliance with external pressures.

Family factors

A family history of substance use, permissive parental attitudes toward alcohol, tobacco, or other psychoactive substances, and frequent conflicts within family relationships are determinant factors in the etiology of addictive behaviors in adolescents. Such dynamics may lead to the modeling of dysfunctional emotional regulation mechanisms and the early validation of substance use as a legitimate coping strategy. Studies highlight that adolescents from families with a history of substance use or characterized by a permissive parenting style have a significantly increased likelihood of early initiation of use, as well as a rapid transition to problematic forms of use [49, 50]. On the other hand, the presence of solid family cohesion–manifested through open communication, emotional support, and active involvement of parents in the adolescent's daily life–exerts a documented protective effect, contributing to reducing the risk of involvement in deviant behaviors [51]. The importance of a positive family climate is constantly emphasized in the specialized literature, being associated both with preventing the development of addictive behaviors and with promoting psychosocial resilience among adolescents [52]. A specific analysis of the interaction between risk and protective factors in problem gambling behavior highlights that a lack of family cohesion is a significant predictor of adolescent vulnerability [53]. Young people who perceive family relationships as distant or conflictual are more likely to develop a dysfunctional relationship with gambling, especially in the presence of other vulnerabilities, such as impulsiveness, difficulties in emotional regulation, or exposure to supportive social environments. Genetic factors may contribute to the biological predisposition for addiction, while behavioral patterns observed in the family may normalize substance use and reduce the perception of associated risks. Chemical reactions in the brain may favor the reinforcement of

addictive behaviors, and genetic inheritance may explain why a person develops an addiction.

Another cause could be too permissive behavior on the part of parents, which leads to the development of tobacco or alcohol addictions, being freer to experiment with consumption.

Frequent and intense family conflicts can also create a stressful and unstable environment for adolescents, increasing the risk of resorting to addictive substances or behaviors as a coping mechanism.

The lack of strong emotional and relational bonds with parents can lead to the development of addictions. These findings highlight the centrality of the family context in the prevention and early intervention of addictive behaviors, reinforcing the idea that the family represents not only a risk environment but also a potential catalyst for healthy development.

Social and media factors

Addictions accepted among adolescents are favored by factors such as peer influence, social tolerance, and lack of adequate education regarding the risks associated with consumption. These behaviors can have significant consequences on the neurocognitive development, physical health, and social integration of young people. Easy access to substances, peer influence, and community tolerance of certain addictive behaviors play a significant role in the initiation and maintenance of these behaviors. The significant role of influencers and celebrities in shaping adolescents' attitudes toward addictive behaviors is highlighted by direct endorsements and portrayals on social media. For example, adolescents look up to these public figures, viewing them as successful role models whose actions suggest that using e-cigarettes is both beneficial and fashionable [54]. Exposure to online gambling and advertising may influence adolescents to perceive gambling as a harmless activity or, worse, as a way to make a quick buck. In addition, social pressures from peer groups may encourage gambling behaviors [52].

Consequences of Addictive Behaviors

Adolescent exposure to addictive behaviors generates significant neurobiological changes, affecting both the brain's reward system and the regions involved in cognitive and emotional control.

This behavior causes an excessive release of neurotransmitters involved in pleasure processing, which, in the long term, compromises the brain's natural ability to experience gratification in the absence of artificial stimuli. In addition, the increased activation of the amygdala, the brain region associated with primary emotional reactions, including anxiety and irritability, to the detriment of the prefrontal cortex, responsible for decision-making and self-regulation, contributes to the vulnerability of adolescents to impulsive behaviors and emotional imbalances.

In the long term, this addictive behavior is closely correlated with multiple negative consequences, including decreased academic performance, difficulties in social integration and identity formation, neurocognitive deficits affecting memory and executive functions, as well as an increased risk of developing substance use disorders in adulthood.

Impact on physical and mental health

Substance use can lead to health problems, such as respiratory, cardiovascular, and psychiatric disorders. Excessive use of technology can also contribute to anxiety, depression, and social isolation. Research on technology addictions has also examined the influence of abnormal personalities on behavior in this context. Personality disorders are examples of abnormal personalities, conceptualized as extreme variants of normal personality traits [53] Excessive use of technology is linked to a reduction in authentic social interactions, which can increase psychological stress [54].

Substance and alcohol use are associated with respiratory, cardiovascular, neurocognitive disorders, and increased suicide risks.

Studies indicate that chronic cannabis use initiated early is correlated with significant cognitive decline and a reduction in intellectual performance, and exposure to alcohol during adolescence has been associated with a reduction in the volume of the hippocampus, a brain region essential for learning and memory processes. In the USA, tobacco use is the leading cause of preventable disease, disability, and death, with tobacco product use beginning during adolescence [55].

Adolescents and young adults who use e-cigarettes containing nicotine can become addicted to nicotine because e-cigarette aerosols contain highly oxidizing free-base nicotine, the most addictive form of nicotine that is easily absorbed by the body [56]. Research shows that personality disorders, conceptualized as extremes of normal traits, can significantly influence addictive behaviors.

Affecting school performance

Addictions and dependencies can profoundly affect adolescents' school performance, as well as concentration and motivation, leading to absenteeism. Existing studies on online gambling show that poor academic performance, reflected in lower grades in school, is predictive of online monetary gambling among adolescents, which highlights the need for educational and preventive interventions [57].

The Internet addiction is extremely problematic and can lead to poor eating and sleeping habits, lower academic performance, and decreased traditional face-to-face interactions with friends and family.

Substance use causes absenteeism among adolescents and poor school performance due to decreased memory and attention span.

Affecting social relationships

Social relationships are a major determinant of well-being for people in general, but especially for young people.

The relationship between addictive behaviors and social outcomes may not always be negative, with some research showing that in some groups of adolescents, alcohol use has been linked to a stronger connection [58]. Beginning in adolescence, lesbian, gay, and bisexual individuals exhibit higher levels of problematic alcohol use compared to heterosexual populations [59]. However, also because of addictive behavior, adolescents remain isolated, get involved in illegal, antisocial activities, sometimes associated with violence, and risk of suicide. Adolescents with addictive behaviors may experience family conflicts, difficulties in maintaining friendships, and reduced social integration. Excessive behaviors have several negative consequences on

health and well-being. In addition, they often disrupt the dynamics of people's social relationships [54]. A very important consequence of addictive behavior in adolescence is that they, as future adults, will exhibit the same type of behavior and addiction.

MATERIAL AND METHOD

Data Collection Strategy

To assess the impact of addictive behavior among adolescents in this study, a research methodology was adopted based on the analysis of specialized literature and relevant case studies, selected from recognized international databases, such as PubMed, ResearchGate, Elsevier, Scopus, ERIC, and Web of Science, covering the last 5 years (2017-2022).

The search strategy was based on rigorous criteria, including search terms, publication limits, language, and syntax, to include all relevant studies.

The research process was structured in several successive stages.

In the first phase, a systematic search of electronic resources was carried out, followed by a rigorous selection process of relevant materials. The data search strategy required for the analysis aimed to find all relevant studies on the topic of accepted addictive behaviors among adolescents.

The identified articles were subjected to a critical and objective analysis, aiming to identify the most pertinent information available in the scientific literature. Articles that did not provide relevant data or that did not meet the established methodological criteria were excluded from the analysis. The study selection process involved a preliminary evaluation based on titles and abstracts, followed by a detailed analysis to ensure their eligibility.

Eligibility Criteria

The selection of the databases used in this study was based on the criterion of relevance and diversity of recent studies, given their importance for understanding the phenomenon investigated in the current context.

Only scientific works addressing the topic of socially accepted addictions among adolescents were included in the analysis, with a particular emphasis on the risk factors that favor the development of this type of behavior, as well as on its short- and long-term consequences.

The study selection criteria aimed at their relevance to the research subject, using keywords such as addiction in adolescents, socially accepted behaviors, risk factors, prevention strategies, and impact on health. Thus, the selection was made based on clearly defined inclusion criteria, which targeted the typologies of addictions, the impact generated, the severity of the consequences, as well as the specific characteristics of each type of addictive behavior. The inclusion criteria were designed to guarantee the impartiality of the process.

The studies identified as eligible were re-evaluated in detail, allowing for an in-depth analysis of the impact of addictive behaviors among adolescents, as well as their determinants and consequences.

Studies that met the criteria for scientific validity were included in the systematic review. To ensure an integrated perspective on the topic investigated, the review included all relevant sections of the articles and papers examined. The selection criteria aimed, among others, at the clarity of the information presented and the objectivity of the approach to the subject.

The exclusion criteria for the studies initially selected for this research were established based on the following fundamental aspects:

Lack of relevance to the investigated objective, leading to the exclusion of studies that do not present a clear and substantiated connection with the research topic.

1. Significant methodological deficiencies, which lead to the elimination of studies characterized by low validity, reduced reliability, or an insufficiently scientifically substantiated approach.
2. Insufficiency of essential information for the development of the analysis, excluding studies that do not provide relevant data or are necessary to achieve the research objectives.
3. Presentation of contradictory results or lacking empirical support, leading to the exclusion of studies that are not supported by solid scientific evidence or that generate interpretative incoherence.
4. Redundancy of sources through the existence of duplicate studies, eliminating works that replicate the same results and methodologies without making significant additional contributions.
5. Absence of a coherent and rigorously substantiated theoretical framework, which leads to the exclusion of studies that do not integrate clear theoretical concepts or that do not provide an adequate justification of the investigative approach.
6. Temporal non-fitting within the established analysis interval, determining the exclusion of studies that do not respect the period defined for the selection of specialized literature.

Following the pre-selection process of studies, the identified references were deduplicated, resulting in 1,216 unique sources. Titles and abstracts were examined to eliminate irrelevant studies, obtaining a set of 306 articles eligible for full-text analysis. The 306 articles were subjected to a detailed evaluation of the full content. The analysis targeted methodological coherence, thematic relevance, scientific validity, and theoretical or empirical contribution. Following this process, 58 studies were included in the final analysis. Subsequently, an update of the search brought 7 additional studies. The selected studies were organized according to their nature, theoretical vs. applied, the type of addictive behavior analyzed, the highlighted risk factors, and the impact on health. A comparative analysis was conducted between the methodologies used to identify convergences and discrepancies and evaluate the explanatory potential of each study. The entire selection process, including reasons for exclusion, is summarized in the PRISMA flow chart [60] illustrated in **Figure 1**.

Data Extraction

After identifying and selecting eligible studies, the data extraction process was carried out systematically, using a standardized coding sheet developed to ensure the uniformity and reproducibility of the retrieved data. This sheet included

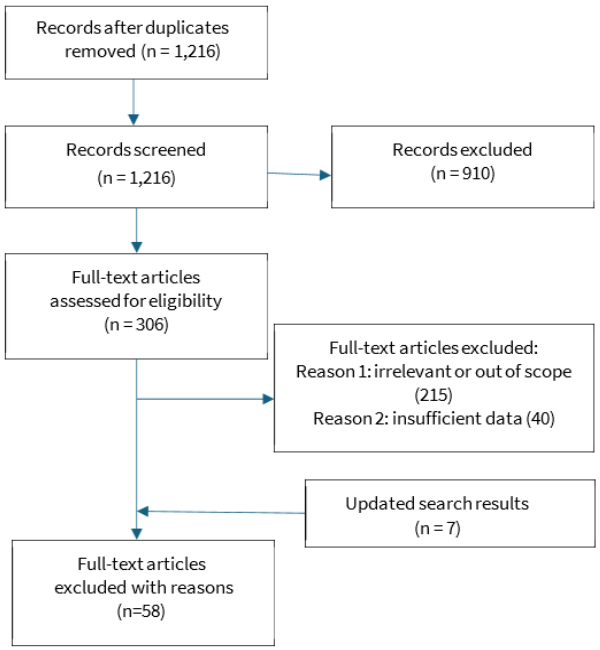

Figure 1. Overview of the study selection (Source: Authors' own elaboration)

key variables such as author and year of publication, research objective, study population (age, sex, educational or family background), type of addictive behavior analyzed, risk factors identified, research methods used (quantitative, qualitative, or mixed), main conclusions, and authors' recommendations.

Data extraction was performed independently by two reviewers to reduce the risk of bias and increase the accuracy of the information collected. In cases of incongruence between the two reviewers, a joint reanalysis was used, and any discrepancies were resolved by consensus or by consulting a third researcher. This process allowed for the maintenance of a high standard of scientific rigor and facilitated the coherent integration of the extracted data into subsequent thematic and comparative analysis. All extracted data were stored and organized in an electronic database. This approach ensured an integrated view of the collected data and facilitated the identification of trends and gaps in the literature. The results of the data extraction process formed the basis for the narrative synthesis and critical analysis presented in the following sections of the study.

RESULTS

Following the analysis of the 58 scientific articles extracted based on clear criteria of relevance, validity, and contemporaneity, published between 2017 and 2022, an intense multidisciplinary concern is observed on addictive behaviors among adolescents.

Table 1 presents the 58 articles studied and the relevant information about them necessary for the study.

The dominant domains identified are psychology, sociology, and education, often approached in an integrated manner.

Table 1. Relevant studies

No	Author(s)	Year	Title	Keywords	Journal
1	Rodríguez-Negro et al.	2020	Creativity outcomes of physical activity interventions for children and adolescents: A systematic review	Smokink, mental health	Abilități de Gândire și Creativitate
2	Squeglia and Jacobus	2018	The influence of substance use on adolescent brain development	Drugs, adolescent development	Clin EEG Neuroscience
3	Peris et al.	2020	Psychological risk factors that predict social media and internet addiction in adolescents	Addictions, adolescents, social factors	Revista Internațională de Cercetare a Mediului și Sănătate Publică
4	Dyer	2019	Associations of child and adolescent anxiety with later alcohol use and disorders: A systematic review and meta-analysis of prospective cohort studies	Anxiety, addictions, teenagers	Addiction
5	Henneberger	2020	Peer influence and substance use among adolescents: A systematic review of dynamic social network research	Peer pressure, substance use	Revizuirea Cercetării Adolescenților
6	Swadi et al.	2020	Individual risk factors for substance use in adolescents	Risks, prevention, adolescents	Drug and Alcohol Dependence
7	Rodríguez-Ruiz et al.	2021	A longitudinal study of substance use in preadolescents and adolescents: Patterns and protective factors within the individual	Longitudinal study, addictive behaviors	Revista Internațională de Psihologie Clinică și a Sănătății
8	Throuvala et al.	2019	Preventing internet addiction among adolescents in schools: Prevention is key. A systematic review of the literature	Psychological intervention, prevention	Neurofarmacologie Actuală
9	Skinner et al.	2019	Food addiction and mental health in adolescents: A systematic review	Mental health, anxiety, addictions, teenagers	The Lancet. Child & Adolescent Health
10	Benchaya et al.	2021	The role of parenting styles in substance use cessation among adolescents: Results of a Brazilian prospective study	Parents, influence, addictive behaviors	Centrul Internațional de Sănătate Publică Pentru Mediu
11	Cerniglia et al.	2017	Internet addiction in adolescence: Neurobiological, psychosocial and clinical issues	Social impact, addictive behaviors	Jurnalul oficial al Societății Internaționale de Neuroștiințe Comportamentale
12	Demirezen et al.	2020	Agents of change: The role of peer education in preventing adolescent substance abuse	School programs, prevention, addictions	Jurnalul de Abuz de Substanțe la Copil și Adolescent
13	Barnes et al.	2020	Gender differences in adolescent drug use: The impact of parental monitoring and peer deviance	Gender, drug use, adolescents	Journal of Gender Studies

Table 1 (Continued). Relevant studies

No	Author(s)	Year	Title	Keywords	Journal
14	Williams et al.	2021	Gender differences among adolescents with substance abuse problems in Maria Clinics in Sweden	Community programs, addiction prevention	Community Health Journal
15	Anderson et al.	2018	Preventing adolescent alcohol use through family-based interventions	Alcohol prevention, family intervention	Studii Nordice Despre Alcool si Droguri
16	Lindenberg et al.	2022	Effectiveness of cognitive behavioral therapy–based intervention in preventing gaming disorder and unspecified internet use disorder in adolescents: A cluster randomized clinical trial	CBT, prevention, teenage addictions	Psychiatry
17	Griffiths et al.	2021	Adolescent social media addiction	Social media, addictive behaviors	Revista Educație și Sănătate
18	Diane et al.	2020	Adolescent peer support groups to reduce risky behaviors	Group support, drug use	Adolescent Peer Support Groups
19	Paquette et al.	2020	A framework for integrating young colleagues in recovery in adolescent substance use prevention and early intervention	Prevention programs, addictions	Comportamente Adictive
20	Wilson et al.	2019	Intervening in adolescent addiction behaviors: A review of current practices	Intervention, addictive behaviors	Journal of Psychological Health
21	Gopalan et al.	2017	The use of peers in services for youth with emotional and behavioral problems: A review of the scope	Family dynamics, addictive behaviors	Jurnalul Adolescenței
22	Mushonga et al.	2020	Protective factors associated with positive mental health in traditional and nontraditional students of color	Anxiety, addictions, teenagers	American Psychological Association
23	Alarcó-Rosales et al.	2021	Effects of a school-based intervention to prevent substance use among adolescents at risk of academic failure: A pilot study of the reasoning and rehabilitation V2 program	School education, addiction prevention	Healthcare
24	Serra et al.	2021	Emotional reactivity and emotional regulation difficulties in drug users: A study conducted on adolescents in treatment in a therapeutic community	Emotional regulation, adolescent addictions	Revista Internațională a Comunităților Terapeutice
25	Fam et al.	2018	Prevalence of internet gaming disorder in adolescents: A meta-analysis across three decades	Community resources, prevention, addictions	Scandinavian Journal of Psychology
26	Tomova et al.	2021	The importance of belonging and avoiding social risk-taking in adolescence	Social influence, family, adolescents	Revizuirea Dezvoltarii
27	Ahmed et al.	2018	Susceptibility to prosocial and antisocial influences in adolescence	Family therapy, addiction prevention	Jurnalul Adolescenței
28	Jones et al.	2019	Risk factors associated with adolescent addiction and mental health outcomes	Risk factors, mental health	Journal of Adolescent Health
29	Andrews et al.	2020	Heightened concern for social risk in adolescence: Development and validation of a new measure	Mental health, substance use	Științe ale Creierului
30	Huriahet al.	2021	Preventing smoking in schools among adolescents in developing countries: A literature review	Smoking, alcohol, prevention, education	Macedonian Journal of Medical Science
31	Rajyasri et al.	2020	Psychosocial factors contributing to substance abuse among adolescents–A qualitative study	Psychological factors, substance use	Revista de Cercetari
32	Heneberger et al.	2019	LTP induction drives remodeling of astroglia to boost glutamate escape from synapses	Neuropsychiatric changes	Neuroscience
33	Henneberger, et al.	2021	Preventing substance use among adolescents: A content analysis of peer processes targeted within universal school curricula.	Education, prevention, mental health	The Journal of Primary Prevention
34	Das et al.	2020	Interventions for substance abuse among adolescents: An overview of systematic reviews	Cognitive-behavioral intervention	Journal of Adolescent Health
35	Steele et al.	2020	Interventions for substance use disorders in adolescents: A systematic review	Social support, recovery, addictions	Agenția Pentru Cercetare și Calitate în Domeniul Sănătăți
36	Filges et al.	2020	Cognitive-behavioral therapies for youth in outpatient treatment for non-opioid drug use	Parenting styles, addictions, teenagers	Sage Journals
37	Fisher et al.	2020	Determinants of acceptance of telerehabilitation by healthcare practitioners	Trauma, addictions, adolescents	The International Journal for Rehabilitation
38	Hogue et al.	2020	Brief behavioral interventions for substance use in adolescents: A meta-analysis	Depression, substance use, adolescents	Pediatrics
39	Bagot et al.	2018	Reducing risks for youth in treatment for substance use disorders: There is no one-size-fits-all solution	Early intervention, addiction prevention	Rapoarte Actuale Privind Dependența
40	Adelman et al.	2020	The need to focus research on interventions for cannabis use among adolescents	Addictions, mental disorders, adolescents	Pediatrics
41	Morgan et al.	2020	The basics of CBT for conduct and substance use problems in adolescents: Comorbidity, clinical techniques, and case examples	Family influence, substance abuse	Practica Cognitiva si Comportamentala

Table 1 (Continued). Relevant studies

No	Author(s)	Year	Title	Keywords	Journal
42	Brown et al.	2019	Clinical performance feedback-based intervention theory (CP-FIT): A new theory for the design, implementation, and evaluation of feedback in healthcare, based on a systematic review and meta-synthesis of qualitative research	Social isolation, addictions, teenagers	Ştiinţa Implementării
43	Amico et al.	2018	Group interventions for young people	Treatment, teenage addictions	Intervenţii Scurte Pentru Abuzul de Alcool şi Substanţe în Rândul Adolescenţilor
44	Dauria et al.	2018	Substance use prevention and treatment interventions for non-incarcerated youth who have been involved in court	Emotional intelligence, teenage addictions	Intervenţii Scurte Pentru Abuzul de Alcool şi Substanţe în Rândul Adolescenţilor
45	Ehrenreich-May et al.	2017	An initial wait-list controlled trial of the unified protocol for the treatment of emotional disorders in adolescents	Mindfulness, prevention, addictions	Jurnalul Tulburărilor de Anxietate
46	Esposito-Smythers et al.	2018	Brief interventions for adolescents with substance abuse and comorbid psychiatric problems	Virtual interventions, teenage addictions	Intervenţii Scurte Pentru Abuzul de Alcool şi Substanţe în Rândul Adolescenţilor
47	Samuel et al.	2020	Daily level changes in social contexts during cannabis use treatment among youth	Social services, education, addiction prevention	Psihologie Clinică: Ştiinţă şi Practică
48	Jenzer et al.	2020	Reciprocal processes in trauma and coping: Bidirectional effects over a four-year period	Extracurricular activities, prevention	Psychological Trauma: Theory, Research, Practice, and Policy
49	Dier et al.	2021	Changes in implicit attitudes toward alcohol during adolescence and associations with emergent alcohol use: Testing the reciprocal determinism hypothesis	Early intervention, substance use	Psihologia Comportamentelor Adictive
50	Dier et al.	2018	A longitudinal examination of the mediating pathways linking chronic victimization and exclusion to alcohol use among adolescents	Sleep, addictions, adolescents	Developmental Psychology
51	van der Polet al.	2019	Common elements of evidence-based systemic treatments for adolescents with disruptive behavior problems	Family therapy, recovery, addictions	Lancet Psychiatry
52	Stirman et al.	2018	Leveraging routine clinical materials and mobile technology to assess CBT fidelity: The Iinnovative methods to assess psychotherapy practices (imAPP) study	Social networks, addiction prevention	Implementation Science
53	Stanhopes et al.	2018	Implementing SBIRT for adolescents within community mental health organizations: A mixed-methods study	Cultures, addictive behaviors	Jurnalul de Tratament al Abuzului de Substanţe
54	Rivenbark et al.	2018	The high societal costs of childhood conduct problems: Evidence from administrative records up to age 38 in a longitudinal birth cohort	Emotional intelligence, addiction prevention	Revista de Psihologie şi Psihiatrie a Copilului
55	Randall et al.	2021	Challenges and possible solutions for implementing contingent management for adolescent substance use disorder in community settings	Socio-economic status, adolescent addictions	Jurnalul Abuzului de Substanţe la Copii şi Adolescenti
56	Carter et al.	2017	The effects of systemic therapy on the mental health of children and adolescents: A meta-analysis	Recovery, teenage addictions	Revista de Psihologie Clinică a Copilului şi Adolescentului
57	Nigg et al.	2017	Annual research review: On the relationships between self-regulation, self-control, executive function, effort-based control, cognitive control, impulsivity, risk-taking, and inhibition in developmental psychopathology	Emotional resilience, addiction prevention	Revista de Psihologie şi Psihiatrie a Copilului
58	Khoddam et al.	2018	Diminished alternative reinforcement as a mechanism linking conduct problems and substance use in adolescence: A longitudinal examination	Prevention, school, substance use	Dependenţă

The domains analyzed with the highest weight are psychological and individual factors (15 studies), family factors (10 studies), social and media factors (10 studies), and alcohol and smoking (10 studies). Domains such as cannabis, recreational drugs, gambling, video game addiction, the Internet addiction, neurobiology, and brain development were also analyzed.

The analysis of keywords frequently associated with the included studies reveals the dominant thematic directions of the specialized literature. Terms such as addiction and addictive behaviors are present in over 80% of the papers. The theme of prevention is addressed in over 40 articles, underlining the constant interest in educational interventions and early risk reduction strategies. The theme of mental health, including aspects such as anxiety, depression, emotional regulation, and trauma, is a topic of interest in 34 studies, highlighting the significant connections between emotional imbalances and susceptibility to addictive behaviors. In over half of the analyzed articles, social influences such as family, peer group, social networks, and community are identified as determining factors in the emergence or prevention of risk behaviors, highlighting the essential role of the psychosocial context in the dynamics of adolescent addictions.

A wide range of proposed strategies is observed: educational interventions, cognitive-behavioral therapy (CBT), family therapy, and the influence of parenting, as well as digital interventions and community programs.

As well as risk factors, the studies analyze individual and psychological factors, family factors, and social and cultural factors.

As well as risk factors, studies examine individual and psychological factors, family factors, and social and cultural factors.

The selected literature describes personality traits such as impulsiveness, the need for thrills, and the reduced capacity for emotional self-regulation as factors strongly correlated with addictive behaviors. Adolescents with these traits are more likely to develop addictions to the Internet, alcohol, or gambling as forms of dysfunctional emotional regulation.

10 articles examine the influence of the family environment, such as parental consumption history, permissive parenting style, family conflicts, and low cohesion. The role of lack of emotional support and negative parental models in the early onset of consumption is emphasized, with adolescents lacking parental guidance being more vulnerable to peer pressure and the development of compulsive behaviors.

Adolescents are strongly influenced by their peer group, social models in the media, but also by the accessibility of substances and permissive cultural norms. The influence of influencers, advertisements, and consumption patterns promoted on social media is discussed. The social normalization of consumption is a catalyst for addictive behaviors, especially among adolescents with a forming identity.

The analysis of studies considered relevant for our study reveals that there is consensus with the general specialized literature on the idea that vulnerability to addictive behaviors in adolescence is multifactorial and has a neurodevelopmental component.

Most studies support the hypothesis of a correlation between emotional regulation deficits and the early onset of consumption behaviors.

Permissive parental models and easy access to technology/games/video/alcohol are considered factors maintaining these behaviors.

DISCUSSION

A total of 58 relevant articles published between 2010 and 2022 addressing the relationship between emotional instability and addictive behaviors among adolescents were analyzed for this study. This integrative analysis highlighted important convergences in the specialized literature, outlining a complex biopsychosocial profile of adolescents vulnerable to addictive behaviors.

One of the central trends highlighted in the analyzed literature is the close association between emotional regulation difficulties and the early onset of substance use among adolescents.

It explored the impact of substance use on brain development in adolescence, highlighting that impulsivity, inhibition difficulties, and incomplete maturation of the prefrontal cortex contribute to risky decision-making [61].

These findings are supported by other work, which has shown that anxiety and emotional distress predispose compulsive substance use as a coping mechanism [62].

Other studies explore the impact of substance use on brain development in adolescence, highlighting that impulsivity, inhibition difficulties, and incomplete maturation of the prefrontal cortex contribute to risky decision-making [63] and other studies show that anxiety and emotional stress predispose compulsive substance use as a coping mechanism [64]. From a psychosocial perspective, the selected studies highlighted the substantial influence of environmental factors. Peer pressure and dysfunctional family dynamics are consistent predictors of the development of risk behaviors. Adolescents from families marked by emotional instability, lack of parental support, or exposure to negative behavioral patterns are significantly more likely to engage in behaviors such as smoking, alcohol or drug use, and gambling [65]. Notably, several articles have highlighted the role of extracurricular activities and educational interventions in reducing addictive behaviors.

These interventions promote critical thinking, emotional regulation, and the development of resilience, thus acting as protective factors against the onset of addictive pathways. Another significant direction highlighted by the analysis is the worrying increase on the Internet and social media addiction, with a focus on the association between compulsive use of technology and symptoms of emotional instability. Another significant direction highlighted by the analysis is the worrying increase on the Internet and social media addiction, with a focus on the association between compulsive use of technology and symptoms of emotional instability. Recent work supports the idea that excessive use of the digital environment can increase feelings of isolation, anxiety, and depression, thus leading to a vicious cycle of emotional avoidance and worsening of psychiatric symptoms [66]. Another significant direction highlighted by the analysis is the worrying increase on the Internet and social media addiction, with a focus on the association between compulsive use of technology and symptoms of emotional instability. Other recent works support the idea that excessive use of the digital environment can increase feelings of isolation, anxiety, and depression, thus leading to a vicious cycle of emotional avoidance and worsening of psychiatric symptoms. In methodological terms, most studies have adopted a cross-sectional design, which limits causal inferences. Still, a few longitudinal studies have been able to track the evolution of addictive behaviors in relation to affective instability over an extended period, providing solid data on the directionality of the relationship. General limitations of the reviewed literature include lack of standardization of psychometric instruments, small or heterogeneous samples, underrepresentation of vulnerable groups such as LGBTQ+ adolescents or ethnic minorities, and absence of interventions validated in culturally diverse contexts. At the same time, therapeutic approaches are rarely integrated, being separated between the medical and psychosocial models.

CONCLUSIONS

The integrative analysis of the 58 articles confirms the existence of a bidirectional and multifactorial link between emotional instability and addictive behaviors in adolescence. The results obtained support the hypothesis that affective imbalance represents a major determinant in the predisposition to dysfunctional consumption behaviors (alcohol, nicotine, psychoactive substances), as well as in the

emergence of behavioral addictions (gambling, compulsive Internet use).

The profile of adolescents at risk of developing some forms of addiction is defined by poor emotional self-regulation, heightened affective instability, and difficulties in managing daily stress. These emotional vulnerabilities interact with environmental factors, such as the influence of the group of affiliation, family dysfunctions, and increased accessibility to substances or stimuli with addictive potential. In parallel, a dangerous social normalization of addictive behaviors is observed, especially about alcohol consumption and the use of electronic cigarettes, a phenomenon that facilitates the internalization of harmful behavioral patterns and the reduction of the perception of the associated risk.

Author contributions: IF: conceptualization, software, validation, formal analysis, writing - original draft, project management, funding acquisition; **GT:** conceptualization, validation, resources, writing - review and editing; **CSS:** methodologies, validation, survey, data cleaning, visualization, supervision; **ELL:** methodologies, formal analysis, visualization, supervision. All authors have agreed with the results and conclusions.

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REFERENCES

1. Patton GC, Sawyer SM, Santelli JS, et al. Our future: A Lancet commission on adolescent health and wellbeing. Lancet. 2016;387(10036):2423-78. https://doi.org/10.1016/S0140-6736(16)00579-1 PMid:27174304
2. Twenge JM, Campbell WK. Associations between screen time and lower psychological well-being among children and adolescents: Evidence from a population-based study. Prev Med Rep. 2018;12:271-83. https://doi.org/10.1016/j.pmedr.2018.10.003 PMid:30406005 PMCid:PMC6214874
3. WHO. Sănătatea mintală a adolescenților [Adolescent mental health].World Health Organization; 2025. Available at: https://www.who.int/news-room/fact-sheets/detail/adolescent-mental-health (Accessed: 29 April 2025).
4. Hale L, Guan S. Screen time and sleep among school-aged children and adolescents: A systematic literature review. Sleep Med Rev. 2015;21:50-8. https://doi.org/10.1016/j.smrv.2014.07.007 PMid:25193149 PMCid:PMC4437561
5. Rodríguez-Negro J, Pasarín-Lavín T, Suarez-Manzano S. Creativity outcomes of physical activity interventions for children and adolescents: A systematic review. Think Skills Creat. 2024;54:101644. https://doi.org/10.1016/j.tsc.2024.101644
6. Becerra R, Preece D, Campitelli G, Scott-Pillow G. The assessment of emotional reactivity across negative and positive emotions: Development and validation of the perth emotional reactivity scale (PERS). Assessment. 2019;26(5):867-79. https://doi.org/10.1177/1073191117694455 PMid:29214846
7. EMCDDA. New psychoactive substances–The current situation in Europe. EMCDDA; 2023. Available at: https://www.euda.europa.eu/publications/european-drug-report/2023/new-psychoactive-substances_en https://www.emcdda.europa.eu/Publications/European-Drug-Report/2023/New-Psychoactive-Substances_En - Level-3-Section1 (Accessed: 29 April 2025).
8. UNODC. Raportul mondial privind drogurile 2023 [World drug report 2023]. UNODC; 2025. Available at: https://www.unodc.org/unodc/en/data-and-analysis/world-drug-report-2023.html (Accessed: 29 April 2025).
9. Degenhardt L, Stockings E, Patton G, Hall WD, Lynskey M. The increasing global health priority of substance use in young people. Lancet Psychiatry. 2016;3(3):251-64. https://doi.org/10.1016/S2215-0366(15)00508-8 PMid:26905480
10. Molina BSG, Kennedy TM, Howard AL, et al. Association between stimulant treatment and substance use through adolescence into early adulthood. JAMA Psychiatry. 2023;80(9):933-41. https://doi.org/10.1001/jamapsychiatry.2023.2157 PMid:37405756 PMCid:PMC10323757
11. Libris. Adicții în societatea contemporană. De la acceptare la schimbare [Addictions in contemporary society. From acceptance to change]. Libris; 2025. Available at: https://www.libris.ro/adictiile-in-societatea-contemporana-de-la-POL978-973-46-9599-7--p35460145.html?srsltid=AfmBOoo8-TBE4sM7jdRzCDfKCHkMkznHNMaVosCP7Sc_XkZThvFDWcQ5 (Accessed: 28 March 2025).
12. Hussain Z, Pontes HM. Personality, internet addiction, and other technological addictions: A psychological examination of personality traits and technological addictions. In: Bozoglan B, editor. Psychological, social, and cultural aspects of internet addiction. IGI Global; 2018. p. 45-71. https://doi.org/10.4018/978-1-5225-3477-8.ch003
13. Jordan CJ, Andersen SL. Sensitive periods of substance abuse: Early risk for the transition to dependence. Dev Cogn Neurosci. 2016;25:29. https://doi.org/10.1016/j.dcn.2016.10.004 PMid:27840157 PMCid:PMC5410194
14. Gruber SA, Dahlgren MK, Sagar KA, Gönenç A, Lukas SE. Worth the wait: Effects of age of onset of marijuana use on white matter and impulsivity. Psychopharmacology (Berl). 2014;231(8):1455-65. https://doi.org/10.1007/s00213-013-3326-z PMid:24190588 PMCid:PMC3967072
15. Grüsser, SM, Wrase J, Klein S, et al. Cue-induced activation of the striatum and medial prefrontal cortex is associated with subsequent relapse in abstinent alcoholics. Psychopharmacology (Berl). 2004;175(3):296-302. https://doi.org/10.1007/s00213-004-1828-4 PMid:15127179
16. Brenhouse HC, Andersen SL. Developmental trajectories during adolescence in males and females: A cross-species understanding of underlying brain changes. Neurosci Biobehav Rev. 2011;35(8):1687-703. https://doi.org/10.1016/j.neubiorev.2011.04.013 PMid:21600919 PMCid:PMC3134153
17. Gulley JM, Juraska JM. The effects of abused drugs on adolescent development of corticolimbic circuitry and behavior. Neuroscience. 2013;249:3-20. https://doi.org/10.1016/j.neuroscience.2013.05.026 PMid:23711583 PMCid:PMC3755361

18. Jones J, Penner F, Schramm AT, Sharp C. Experiential avoidance in adolescents with borderline personality disorder: Comparison with a non-BPD psychiatric group and healthy controls. Cogn Behav Ther. 2020;49(3):197-209. https://doi.org/10.1080/16506073.2019.1623303 PMid: 31185829
19. Wills TA, Simons JS, Sussman S, Knight R. Emotional self-control and dysregulation: A dual-process analysis of pathways to externalizing/internalizing symptomatology and positive well-being in younger adolescents. Drug Alcohol Depend. 2016;163(Suppl 1):S37. https://doi.org/10.1016/j.drugalcdep.2015.08.039 PMid:27306730 PMCid: PMC4911542
20. SAMHSA. Conducerea cu deficienţe: Vorbeşte cu copiii tăi [Impaired driving: Talk to your kids]. SAMHSA; 2025. Availale at: https://www.samhsa.gov/substance-use/prevention/talk-they-hear-you/parent-resources/impaired-driving (Accessed: 29 March 2025).
21. Durkee, T, Carli V, Floderus B, et al. Pathological internet use and risk-behaviors among European adolescents. Int J Environ Res Public Health. 2016;13(3):294. https://doi.org/10.3390/ijerph13030294 PMid:27005644 PMCid: PMC4808957
22. Ionascu G, Glavan A, Robu V. Relationship between emotional instability and risk of alcohol abuse among adolescents: The moderating role of predisposition to engage in risky behaviors. EcoSoEn. 2023;1:43-59. https://doi.org/10.54481/ecosoen.2023.1.05
23. OECD. OECD data explorer. OCDE; 2025.Available at: https://www.oecd.org/en/data/datasets/oecd-DE.html (Accessed: 30 March 2025).
24. EUDA. Alte droguri–Ituaţia actuală în Europa [Other drugs–The current situation in Europe]. EUDA; 2025. Available at: https://www.euda.europa.eu/publications/european-drug-report/2024/other-drugs_en (Accessed: 30 March 2025).
25. Walker N, Parag V, Wong S, et al. Use of e-cigarettes and smoked tobacco in youth aged 14-15 years in New Zealand: Findings from repeated cross-sectional studies (2014-19). Lancet Public Health. 2020;5(4):e204-12. https://doi.org/10.1016/S2468-2667(19)30241-5 PMid:31981489
26. Cummings KM, Hammond D. E-cigarettes: Striking the right balance. Lancet Public Health. 2020;5(4):e180-1. https://doi.org/10.1016/S2468-2667(20)30004-9 PMid: 31981490
27. Soneji S, Barrington-Trimis J, Wills TA, et al. Association between initial use of e-cigarettes and subsequent cigarette smoking among adolescents and young adults: A systematic review and meta-analysis. JAMA Pediatr. 2017;171(8):788-97. https://doi.org/10.1001/jamapediatrics.2017.1488 PMid:28654986 PMCid:PMC5656237
28. Wang TW, Gentzke AS, Creamer MR, et al. Tobacco product use and associated factors among middle and high school students–United States, 2019. MMWR Surveill Summ. 2019; 68(12):1-22. https://doi.org/10.15585/mmwr.ss6812a1 PMid:31805035 PMCid:PMC6903396
29. Humphreys J, Atkinson C. Adolescent cannabis use–Motives, frequency and consequences: A systematic literature review. J Child Adoles Subst Abuse. 2025;30(3):83-102. https://doi.org/10.1080/29973368.2025.2458854
30. Castro JDJM, Ramirz LM, Castro JMM, et al. Comparing tobacco and cannabis use among youth: Insights from the national youth tobacco survey (NYTS) data (2021). Chest. 2023;164(4):A6391-2. https://doi.org/10.1016/j.chest.2023.07.4119
31. Calado F, Alexandre J, Griffiths MD. Prevalence of adolescent problem gambling: A systematic review of recent research. J Gambl Stud. 2017;33(2):397-424. https://doi.org/10.1007/s10899-016-9627-5 PMid:27372832 PMCid:PMC5445143
32. Tara EM, Leatherdale ST, Turner NE. An examination of internet and land-based gambling among adolescents in three Canadian provinces: Results from the youth gambling survey (YGS). BMC Public Health. 2016;16(1):1-10. https://doi.org/10.1186/s12889-016-2933-0 PMid:26987439 PMCid:PMC4797155
33. NCPG. National council on problem gambling. NCPG; 2025. Available at: https://www.ncpgambling.org/ncpg/ (Accessed: 29 March 2025).
34. Blinn-Pike L, Worthy SL, Jonkman JN. Adolescent gambling: A review of an emerging field of research. J Adoles Health. 2010;47(3):223-36. https://doi.org/10.1016/j.jadohealth.2010.05.003 PMid:20708560
35. Yau YHC, Potenza MN. Gambling disorder and other behavioral addictions: Recognition and treatment. Harv Rev Psychiatry. 2015;23(2):134. https://doi.org/10.1097/HRP.0000000000000051 PMid:25747926 PMCid: PMC4458066
36. Wiederhold BK. How digital anxieties are shaping the next generation's mental health. Cyberpsychol Behav Soc Netw. 2017;20(11):661. https://doi.org/10.1089/cyber.2017.29089.bkw PMid:29125792
37. Starcevic V, Aboujaoude E. Internet gaming disorder, obsessive-compulsive disorder, and addiction. Curr Addict Rep. 2017;4(3):317-22. https://doi.org/10.1007/s40429-017-0158-7
38. Starcevic V, Aboujaoude E. Internet addiction: Reappraisal of an increasingly inadequate concept. CNS Spectr. 2017;22(1):7-13. https://doi.org/10.1017/S1092852915000863 PMid:26831456
39. American Psychiatric Association. Tulburarea bipolară şi tulburările înrudite [Bipolar disorder and related disorders]. American Psychiatric Association; 2016. Available at: https://www.reginamaria.ro/utile/dictionar-de-afectiuni/tulburarea-bipolara (Accessed: 30 March 2025).
40. Ozturk FO, Ekinci M, Ozturk O, Canan F. The relationship of affective temperament and emotional-behavioral difficulties to internet addiction in Turkish teenagers. ISRN Psychiatry. 2013;2013:1-6. https://doi.org/10.1155/2013/961734 PMid:23738226 PMCid:PMC3658434
41. Hee JY, Cho SC, Ha J, et al. Attention deficit hyperactivity symptoms and internet addiction. Psychiatry Clin Neurosci. 2004;58(5):487-94. https://doi.org/10.1111/j.1440-1819.2004.01290.x PMid:15482579
42. Yen J-Y, Ko C-H, Yen C-F, Wu H-Y, Yang M-J. The comorbid psychiatric symptoms of Internet addiction: Attention deficit and hyperactivity disorder (ADHD), depression, social phobia, and hostility. J Adolesc Health. 2007;41(1):93-8. https://doi.org/10.1016/j.jadohealth.2007.02.002 PMid:17577539

43. Dickson L, Derevensky JL, Gupta R. Youth gambling problems: Examining risk and protective factors. Int Gambl Stud. 2008;8(1):25-47. https://doi.org/10.1080/14459790701870118
44. GAO. Impact of gambling. Economic effects more measurable social effects. GAO; 2000. Available at: https://www.gao.gov/assets/ggd-00-78.pdf (Accessed: 30 March 2025).
45. Adekeye OT, Boltz M, Jao Y-L, Branstetter S, Exten C. Vaping in the sigital age: How social media influences adolescent attitudes and beliefs about e-cigarette use. J Child Adoles Subst Abuse. 2025;30(1):13-26. https://doi.org/10.1080/1067828X.2024.2439599
46. Hahn E, Reuter M, Spinath FM, Montag C. Internet addiction and its facets: The role of genetics and the relation to self-directedness. Addict Behav. 2017;65:137-46. https://doi.org/10.1016/j.addbeh.2016.10.018 PMid:27816039
47. Latendresse SJ, Rose RJ, Viken RJ, Pulkkinen L, Kaprio J, Dick DM. Parenting mechanisms in links between parents' and adolescents' alcohol use behaviors. Alcohol Clin Exp Res. 2008;32(2):322-30. https://doi.org/10.1111/j.1530-0277.2007.00583.x PMid:18162066 PMCid:PMC2504716
48. Ryan C, Russell ST, Huebner D, Diaz R, Sanchez J. Family acceptance in adolescence and the health of LGBT young adults. J Child Adoles Psychiatr Nurs. 2010;23(4):205-13. https://doi.org/10.1111/j.1744-6171.2010.00246.x PMid:21073595
49. Velleman R, Templeton LJ. Impact of parents' substance misuse on children: An update. BJPsych Adv. 2016;22(2):108-17. https://doi.org/10.1192/apt.bp.114.014449
50. Hair EC, Moore KA, Garrett SB, Ling T, Cleveland K. The continued importance of quality parent-adolescent relationships during late adolescence. J Res Adoles. 2008;18(1):187-200. https://doi.org/10.1111/j.1532-7795.2008.00556.x
51. Dowling NA, Merkouris SS, Greenwood CJ, Oldenhof E, Toumbourou JW, Youssef GJ. Early risk and protective factors for problem gambling: A systematic review and meta-analysis of longitudinal studies. Clin Psychol Rev. 2017;51:109-24. https://doi.org/10.1016/j.cpr.2016.10.008 PMid:27855334
52. Browne DT, Wade M, May SS, et al. Children's mental health problems during the initial emergence of COVID-19. Can Psychol. 2021;62(1):65-72. https://doi.org/10.1037/cap0000273
53. Saulsman LM, Page AC. The five-factor model and personality disorder empirical literature: A meta-analytic review. Clin Psychol Rev. 2004;23(8):1055-85. https://doi.org/10.1016/j.cpr.2002.09.001 PMid:14729423
54. Savolainen I, Kaakinen M, Sirola A, Oksanen A. Addictive behaviors and psychological distress among adolescents and emerging adults: A mediating role of peer group identification. Addict Behav Rep. 2018;7:75. https://doi.org/10.1016/j.abrep.2018.03.002 PMid:29892700 PMCid:PMC5993892
55. Park-Lee E, Ren C, Cooper M, Cornelius M, Jamal A, A. Cullen K. Tobacco product use among middle and high school students–United States, 2022. MMWR Morb Mortal Wkly Rep. 2022;71(45):1429-35. https://doi.org/10.15585/mmwr.mm7145a1 PMid:36355596 PMCid:PMC9707354
56. Goel R, Durand E, Trushin N, et al. Highly reactive free radicals in electronic cigarette aerosols. Chem Res Toxicol. 2015;28(9):1675-7. https://doi.org/10.1021/acs.chemrestox.5b00220 PMid:26244921 PMCid:PMC4961046
57. Floros G, Paradisioti A, Hadjimarcou M, Mappouras DG, Karkanioti O, Siomos K. Adolescent online gambling in cyprus: Associated school performance and psychopathology. J Gambl Stud. 2015;31(2):367-84. https://doi.org/10.1007/s10899-013-9424-3 PMid:24293015
58. Stogner J, Boman JH, Miller BL. Assessing the relationship between divergent drinking and perceptions of friendship quality between students. J Child Adolesc Subst Abuse. 2015;24(6):387-96. https://doi.org/10.1080/1067828X.2013.872065
59. McCabe CJ. Minority stress and the development of problem alcohol use among sexual minority youth: A scoping review synthesizing multidisciplinary mechanisms of risk. J Child Adoles Subst Use. 2025;30(2):35-51. https://doi.org/10.1080/1067828X.2024.2445566
60. Moher D, Liberati A, Tetzlaff J, Altman DG. Preferred reporting items for systematic reviews and meta-analyses: The PRISMA statement. BMJ. 2009;339:b2535. https://doi.org/10.1136/bmj.b2535 PMid:19622551 PMCid:PMC2714657
61. Squeglia LM, Jacobus J, Tapert SF. The influence of substance use on adolescent brain development. Clin EEG Neurosci. 2009;40(1):31-8. https://doi.org/10.1177/155005940904000110 PMid:19278130 PMCid:PMC2827693
62. Peris M, de la Barrera U, Schoeps K, Montoya-Castilla I. Psychological risk factors that predict social networking and internet addiction in adolescents. Int J Environ Res Public Health. 2020;17:4598. https://doi.org/10.3390/ijerph17124598 PMid:32604834 PMCid:PMC7344613
63. Henneberger AK, Mushonga DR, Preston AM. Peer influence and adolescent substance use: A systematic review of dynamic social network research. Adolesc Res Rev. 2021;6(1):57-73. https://doi.org/10.1007/s40894-019-00130-0
64. Gopalan G, Lee SJ, Harris R, Acri MC, Munson MR. Utilization of peers in services for youth with emotional and behavioral challenges: A scoping review. J Adolesc. 2017;55(1):88-115. https://doi.org/10.1016/j.adolescence.2016.12.011 PMid:28068538
65. Mushonga DR, Henneberger AK. Protective factors associated with positive mental health in traditional and nontraditional black students. Am J Orthopsychiatry. 2020;90(1):147-60. https://doi.org/10.1037/ort0000409 PMid:30920241
66. Lindenberg K, Kindt S, Szász-Janocha C. Effectiveness of cognitive behavioral therapy-based intervention in preventing gaming disorder and unspecified internet use disorder in adolescents: A cluster randomized clinical trial. JAMA Netw Open. 2022;5(2):e2148995. https://doi.org/10.1001/jamanetworkopen.2021.48995 PMid:35179587 PMCid:PMC8857686