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Risk Factors for Narcotics, Psychotropics, and Addictive Substances (NAPZA) Use in Adolescents: A Systematic Review

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Abstract

The use of Narcotics, Psychotropic Substances, and Addictive Substances (NAPZA) among adolescents is a global public health issue that continues to increase. Adolescents are a vulnerable group to risky behaviors due to biological, psychological, and social changes. This study aims to identify and analyze the risk factors of NAPZA use among adolescents using a systematic review approach. The research method applied the PICO framework with literature searches conducted in PubMed and Google Scholar databases within the 2021-2025 period. A total of 148 articles were initially identified, and after the selection process, 18 articles were included as the main sources of analysis. In addition, 5 national journal articles were included as supporting references, resulting in a total of 23 analyzed articles. The data were extracted, classified, and analyzed using a scoring approach based on three categories of risk factors: individual, family, and social-environmental factors. The results indicate that the risk factors for NAPZA use among adolescents are multifactorial. Based on frequency analysis, social and environmental factors were the most dominant, appearing in 21 articles, followed by individual factors in 20 articles and family factors in 18 articles. Individual factors include depression, anxiety, low self-control, and curiosity; family factors include lack of parental supervision, family conflict, and economic conditions; while social and environmental factors include peer influence, ease of access to substances, and living environment conditions. Peer influence was identified as the most dominant and consistently reported risk factor across countries. Additionally, variations in risk factors across countries were influenced by social, cultural, and economic conditions. Therefore, NAPZA use among adolescents is a complex phenomenon that requires comprehensive and context-specific prevention approaches.

Introduction

The abuse of narcotics, psychotropic substances, and addictive substances (NAPZA) remains one of the most significant public health challenges worldwide. NAPZA refers to substances that affect the central nervous system and may alter mood, cognition, behavior, and perception, potentially leading to physical and psychological dependence. The misuse of these substances has become a growing global concern because of its extensive impact on health, social welfare, economic productivity, and public security. the United Nations Office on Drugs and Crime, approximately 296 million people worldwide used drugs in 2022, representing a substantial increase compared to previous decades. Furthermore, more than 39 million individuals were

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estimated to suffer from drug use disorders requiring treatment and rehabilitation services. Recent global reports indicate that the burden of substance abuse continues to increase because of population growth, urbanization, socioeconomic inequalities, and the expansion of illicit drug markets (Chen et al., 2025; An et al., 2025).

Beyond its contribution to morbidity and mortality, NAPZA abuse is associated with substantial disability, reduced quality of life, impaired social functioning, loss of productivity, and considerable economic costs. Individuals with substance use disorders frequently experience long-term health complications, including mental illness, cardiovascular disorders, liver disease, infectious diseases, and neurological impairments. These consequences place significant pressure on healthcare systems and national economies. Consequently, understanding the epidemiological patterns and determinants associated with NAPZA abuse remains a critical priority for both public health practice and policymaking (Gresika & Setiadi, 2025; Siagian, 2025).

Traditionally, substance abuse has often been associated with marginalized populations. However, accumulating evidence indicates that the prevalence of NAPZA use among adolescents and young adults has increased considerably over recent decades. Epidemiological studies from various countries report rising rates of experimentation and regular use of cannabis, stimulants, synthetic drugs, and prescription medications among younger populations. Several surveys have demonstrated a gradual increase in drug exposure among adolescents and university students, suggesting that substance abuse has become an increasingly important public health concern. This trend is particularly alarming because young people represent a productive segment of society, and early exposure to addictive substances may result in long-term social, psychological, and economic consequences.

The increasing prevalence of NAPZA abuse among young people is closely linked to the growing presence of multiple risk factors (Apriliani & Deniati, 2026; Hermansyah et al., 2026). Peer influence remains one of the most consistently reported determinants, while family dysfunction, low socioeconomic status, unemployment, academic stress, and exposure to drug-related environments have also been identified as major contributors to substance use initiation. Recent evidence suggests that the development of substance abuse extends beyond traditional risk factors alone. Several emerging determinants have been increasingly recognized, including psychosocial stress, mental health disorders, social isolation, trauma exposure, adverse childhood experiences, and digital media influences. Chronic psychological stress and untreated mental health conditions may increase vulnerability to substance dependence, while social media exposure may facilitate the normalization of substance use behaviors among adolescents and young adults.

An additional complexity in contemporary NAPZA abuse is the emergence of new psychoactive substances (NPS), often referred to as designer drugs (Soni, 2024; Chiappin et al., 2024; Greco, 2025). These substances are frequently synthesized to mimic the effects of traditional illicit drugs while avoiding existing legal controls. In addition, polysubstance use, involving the consumption of multiple substances simultaneously or sequentially, has become increasingly prevalent and is associated with higher risks of dependence, overdose, and psychiatric complications. These developments indicate that substance abuse constitutes a heterogeneous public health problem requiring comprehensive prevention, surveillance, and treatment strategies.

Gender differences also play a significant role in the epidemiology and consequences of NAPZA abuse (Momen et al., 2024; Sulistiawati et al., 2024; Azzahroh et al., 2025). Although men account for the majority of substance users worldwide, women often experience more

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severe physical, psychological, and social consequences following substance use. Women may face unique risk factors related to trauma, gender-based violence, reproductive health concerns, and social stigma, all of which may influence patterns of substance use and treatment outcomes. Consequently, gender-sensitive approaches have become increasingly important in addressing substance abuse among diverse populations.

In Indonesia, NAPZA abuse remains a major public health and social challenge. Data from the National Narcotics Board (BNN) indicate that millions of Indonesians have been exposed to illicit drugs, with adolescents and young adults representing a substantial proportion of users. Drug-related crimes continue to increase, while substance abuse contributes significantly to health problems, family disruption, educational challenges, and economic losses. These figures underscore the considerable social and economic impact of NAPZA abuse in Indonesia and highlight the importance of preventive strategies targeting vulnerable populations, particularly younger individuals (Fahriani et al., 2025; Kharis & Rizal, 2025).

Despite growing recognition of NAPZA abuse as a critical public health issue, important gaps remain in understanding its epidemiological characteristics, behavioral determinants, health consequences, and intervention strategies (Ashariet al., 2025). Many studies have primarily focused on prevalence estimates, whereas the interactions among psychological, social, environmental, and biological factors remain underexplored. Furthermore, differences in study populations, definitions, and research methodologies have produced heterogeneous findings that require comprehensive synthesis. Given the increasing prevalence of NAPZA abuse and its long-term consequences on health, social welfare, productivity, and healthcare costs, a deeper understanding of this phenomenon is essential to support effective prevention, early intervention, rehabilitation, and policy development (Anissaniwaty et al., 2025; Subiyantoro et al., 2025).

Method

Research Design

This study employed a systematic review design to identify, evaluate, and synthesize scientific evidence regarding risk factors associated with the use of Narcotic Drugs, Psychotropic Substances, and Addictive Substances (NAPZA) among adolescents. A systematic review was selected because it enables a comprehensive examination of findings from multiple studies conducted in different countries and sociocultural settings. Through this approach, evidence from previous research can be systematically collected, critically evaluated, and integrated to provide a broader understanding of the determinants of adolescent substance use. The review focused on identifying individual, family, social, and environmental factors associated with NAPZA use among adolescents. The entire review process was conducted systematically through literature identification, screening, eligibility assessment, data extraction, and synthesis of findings to ensure transparency and methodological rigor.

PICO Framework

To guide the literature search process and ensure that the review remained focused on the research objective, the PICO (Population, Intervention/Exposure, Comparison, Outcome) framework was applied. The framework facilitated the development of search terms, determination of eligibility criteria, and selection of relevant studies. The population consisted of adolescents aged 10–19 years, while the exposure component included various risk factors associated with substance use, including individual, family, social, and environmental determinants. The comparison group consisted of adolescents who were not exposed to

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identified risk factors, and the outcome of interest was the occurrence of drug use or substance abuse behavior.

Table 1. Description of the PICO Approach

Component	Information
Population (P)	Adolescents aged 10–19 years
Intervention/Exposure (I)	Risk factors (individual, family, social, environmental)
Comparison (C)	Adolescents not exposed to risk factors
Outcome (O)	Drug use

The PICO framework served as the conceptual basis for the search strategy and article selection process. By clearly defining the population, exposure, comparison, and outcome, the framework helped ensure that the selected studies were directly relevant to the objectives of this review.

Literature Search Strategy

A comprehensive literature search was conducted using two electronic databases, namely PubMed and Google Scholar. These databases were selected because they provide extensive coverage of research in public health, medicine, psychiatry, psychology, and adolescent behavioral studies. The search was restricted to articles published between 2021 and 2025 to capture the most recent evidence regarding adolescent substance use and its associated risk factors. Only articles published in English were included to ensure consistency in the review process and facilitate accurate interpretation of findings.

The search strategy utilized combinations of keywords related to adolescent substance use and risk factors. Keywords included “adolescent” and “substance use,” “teenager” and “drug abuse,” “youth” and “risk factors,” as well as “substance abuse” and “determinants.” Boolean operators such as AND were used to increase search precision and retrieve studies that specifically addressed the relationship between adolescent populations and substance use risk factors. In addition to database searches, manual searches were conducted by examining the reference lists of relevant articles and identifying additional national studies that contributed contextual information relevant to the research objective.

Eligibility Criteria

Eligibility criteria were established before the screening process to ensure that only studies relevant to the research objective were included in the review. Articles were considered eligible if they were primary research studies employing quantitative, qualitative, or mixed methods designs and were published between 2021 and 2025. The studies were required to focus specifically on adolescents aged 10–19 years and explicitly investigate factors associated with substance use or drug abuse. Furthermore, only full-text articles available in English and conducted in any geographical region were included.

Studies were excluded if they failed to provide a clear methodological description, demonstrated substantial methodological weaknesses that could compromise the validity of findings, or did not present specific information regarding risk factors associated with adolescent substance use. Studies in which adolescent participants could not be clearly distinguished from other age groups were also excluded. In addition, editorials, opinion articles, conference abstracts, commentaries, and duplicate publications were removed from the review process because they did not provide sufficient empirical evidence for analysis.

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Study Selection Process

The study selection process was conducted in several stages to ensure methodological transparency and consistency. The initial search identified 148 potentially relevant articles from PubMed and Google Scholar. After removing 38 duplicate records, 110 articles remained for title and abstract screening. During this stage, each article was assessed for relevance to the research objective, resulting in the exclusion of 78 articles that did not focus on adolescent populations, did not investigate risk factors for substance use, or were otherwise unrelated to the topic under study.

The remaining 32 articles underwent a full-text review to determine their eligibility based on the predefined inclusion and exclusion criteria. During this phase, 14 articles were excluded because they lacked sufficient methodological information, failed to present specific risk factor data, or involved inappropriate study populations. Consequently, 18 articles met all eligibility requirements and were included in the primary analysis. To strengthen the contextual understanding of adolescent NAPZA use, an additional manual search identified five relevant national journal articles that were used as supporting references. Therefore, a total of 23 articles contributed to the synthesis and interpretation of findings in this review.

Data Extraction

Data extraction was conducted systematically using a standardized data extraction form developed for this review. Relevant information was collected from each study, including the author and year of publication, country of origin, study design, sample size, participant characteristics, age range of respondents, identified risk factors, and key findings. This process ensured consistency in data collection across studies and facilitated comparisons between findings from different countries and research settings. The extracted information was subsequently organized into tables to support systematic analysis and interpretation.

Data Synthesis and Analysis

The extracted data were analyzed using a descriptive synthesis approach. Following data extraction, all identified risk factors were categorized into three broad domains consisting of individual factors, family factors, and social-environmental factors. This classification was conducted to facilitate comparison across studies and to identify recurring patterns of risk factors associated with adolescent substance use.

After categorization, the findings from each study were tabulated and examined comparatively. Frequency analysis was then performed to determine the most dominant risk factors reported in the literature. A risk factor was considered dominant when it appeared consistently across multiple studies. This approach enabled the identification of factors that were most frequently associated with substance use among adolescents. Furthermore, comparative analysis between countries was undertaken to examine variations in risk factors across different social, cultural, economic, and religious contexts. Such comparisons were important for understanding how contextual influences shape adolescent substance use behaviors in different regions.

The final stage involved narrative synthesis and interpretation of the findings. Similarities and differences among studies were examined, recurring themes were identified, and the relationships between various risk factors were explored. The findings were then interpreted descriptively to provide a comprehensive understanding of the multifactorial nature of NAPZA use among adolescents and the contextual factors that influence substance use behavior across different countries.

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Operational Definition of Variables

To ensure consistency in the classification and interpretation of findings, operational definitions were established for each variable included in the review. These definitions served as a guide during data extraction and synthesis by providing a standardized framework for identifying and categorizing risk factors reported across studies.

Table 2. Operational Definition of Variables

Variable	Indicator	Scoring
Drug Use	Use of narcotics/psychotropic drugs/addictive substances	0 = not using, 1 = using
Individual Factors	Depression, anxiety, impulsivity, curiosity, low self-control, low religiosity	0 = no risk factor, 1 = risk factor present
Family Factors	Low parental supervision, family conflict, family members who use substances, low economic status	0 = no risk factor, 1 = risk factor present
Social and Environmental Factors	Peer influence, social pressure, school environment, access to substances, residential conditions, exposure to social media	0 = no risk factor, 1 = risk factor present

The scoring system was applied solely for descriptive purposes during the synthesis process. A score of one indicated that a particular risk factor was reported within a study, whereas a score of zero indicated that the factor was not identified. This approach enabled the calculation of frequencies and facilitated the identification of dominant risk factor categories across the reviewed literature.

Result and Discussion

This research was conducted using a systematic review method, compiling various scientific articles discussing risk factors for narcotics, psychotropics, and addictive substances (NAPZA) use in adolescents. The selected literature consisted of 18 scientific articles published between 2021 and 2025 and deemed most relevant to the research focus. The following table presents the analyzed results of the systematic review:

Table 3. Systematic Review of Risk Factors for Drug Use in Adolescents

No	Author (Year)	Study Characteristics	Dominant Risk Factors	Main Findings
1	Alipour et al. (2026)	Iran; Secondary analysis; n=127,253; 15–60 years	Individual	Low religiosity and antisocial traits increased drug use risk.
2	Avcı (2025)	Turkey; Qualitative; n=21; 14–18 years	Individual, Family, Social	Family conditions and peer influence contributed to substance use.
3	Kessy et al. (2025)	Tanzania; Cross-sectional; n=1,262; 10–19 years	Individual, Family, Social	Social and educational conditions influenced substance use.
4	Hunduma et al. (2024)	Ethiopia; Cross-sectional; n=3,227; 13–19 years	Individual, Family, Social	Bullying, social media exposure, and family

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				substance use increased risk.
5	Ju & Park (2025)	South Korea; Secondary data analysis; n=82,520; School adolescents	Individual, Family, Social	Anxiety, depression, violence, and family separation increased risk.
6	Sancho-Domingo et al. (2025)	Spain; Cross-sectional; n=2,010; 15–18 years	Individual, Social	Low self-efficacy and ambivalent attitudes contributed to risky substance use.
7	Chen et al. (2025)	Global (204 countries); Longitudinal trend analysis; Population data; 10–24 years	Individual, Social	Alcohol use, drug exposure, and childhood abuse increased substance use disorder burden.
8	Piko (2026)	Hungary; Cross-sectional; n=1,590; ±16 years	Individual, Family	Psychosomatic symptoms and internet addiction increased vulnerability.
9	Okpako et al. (2025)	Nigeria; Cross-sectional survey; n=300; 10–17 years	Family, Social	Parenting style, school adjustment, and peer influence affected substance abuse.
10	Simon et al. (2022)	United States; Clinical review; National data; 10–25 years	Individual, Family, Social	Mental disorders, peer influence, and family history contributed to substance use.
11	Nawi et al. (2021)	Multiple countries; Systematic review; 23 studies; 10–18 years	Individual, Family, Social	Individual, family, and social-environmental factors were major determinants.
12	Hansen et al. (2025)	Denmark; Prospective cohort; n=68,301; 15–19 years	Individual, Family, Social	Childhood adversity, low socioeconomic status, and mental health problems increased risk.
13	Bino Rajamani et al. (2024)	India; Community-based cross-sectional; n=266; 10–19 years	Family, Social	School absence, family substance use, peer pressure, and accessibility increased risk.
14	Kim et al. (2024)	USA, Canada, England, South Korea; Time-series analysis; n≈135,000+; 10–19 years	Family, Social	National regulations and substance accessibility influenced adolescent use.
15	Çınar et al. (2021)	Turkey; Cross-sectional; n=8,402; 15–19 years	Individual, Family, Social	Deviant behavior, peer influence, and

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				substance accessibility increased risk.
16	Deep et al. (2024)	Global; Narrative review; 27 studies; 10–25 years	Individual, Family, Social	Impulsivity, weak self-identity, family support, and peer influence were major determinants.
17	Oladeji et al. (2025)	Belize; Mixed methods; n=1,055; 10–19 years	Individual, Family, Social	Emotional stress, family normalization, social media, and accessibility increased risk.
18	Basyoni et al. (2021)	Egypt; Descriptive study; n=83; 12–18 years	Individual, Family, Social	Family communication, peer influence, school failure, and domestic violence increased risk.
19	Hidayati (2024)	Indonesia; Cross-sectional; n=7,279; 10–24 years	Individual, Family, Social	Internet exposure, peer influence, and urban drug accessibility increased risk.
20	Sirait et al. (2025)	Indonesia; Cross-sectional; n=88; Dominantly adolescents	Individual, Social	Education level, peer influence, and accessibility were associated with drug abuse.
21	Fadillah & Effendi (2026)	Indonesia; Systematic literature review; 13 studies; Adolescents	Individual, Family, Social	Emotional instability, family dysfunction, and peer influence contributed to abuse.
22	Anjani & Hutasoit (2022)	Indonesia; Literature review; Adolescents	Individual, Family, Social	Curiosity, family history, environmental norms, and accessibility increased risk.
23	Sembiring & Batu Bara (2026)	Indonesia; Cross-sectional; n=16; 15–17 years	Individual, Social	Low education, slum conditions, and peer influence increased drug use risk.

Description:

- 0 = no risk factors found in the article
- 1 = risk factors found in the article

Overview of Research Results

A systematic review of 23 articles shows that adolescent drug use is influenced by a complex interaction between individual, family, social, and environmental factors. Based on the scoring-based tabulation, social and environmental factors emerged as the most prevalent, with 21

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articles appearing, followed by individual factors (20 articles), and family factors (18 articles). This distribution indicates that while all factors contribute, there are significant differences in the level of influence among these risk factor categories.

The dominance of social and environmental factors indicates that the context of adolescent interactions plays a stronger role than internal or family factors. This is understandable, as adolescence is a developmental phase marked by an increased need for social acceptance and the formation of self-identity through peer groups. In this regard, drug use behavior is influenced not only by individual circumstances but also by the dynamics of the social groups and the environment in which adolescents interact. Therefore, substance use behavior in adolescents is more accurately understood as a social phenomenon influenced by interpersonal relationships, group norms, and the surrounding environment.

Risk Factor Analysis by Category

Individual Factors

Individual factors were found in most articles, indicating that adolescents' psychological conditions and personal characteristics are the initial foundations for developing drug use behavior. Variables such as depression, anxiety, impulsivity, and low self-control were consistently reported as factors that increase adolescents' vulnerability to substance use. This suggests that drug use often serves as an escape or coping mechanism for poorly managed emotional distress.

Adolescents with psychological disorders tend to have poor emotional regulation skills, making them more susceptible to seeking quick ways to relieve perceived stress, including through substance use (Ju & Park, 2025). Furthermore, low self-efficacy and self-control make it difficult for individuals to resist invitations or pressure from their social environment, increasing the likelihood of engaging in risky behavior (Sancho-Domingo et al., 2025). Individual factors not only act as internal triggers but also as mediators that amplify the influence of external factors.

Characteristics such as impulsivity and antisocial traits also show a significant relationship with substance use. Individuals with impulsive tendencies tend to make decisions without considering long-term consequences, making them more susceptible to experimenting with substance use (Piko, 2026). Meanwhile, antisocial traits that are not balanced with strong moral or religious values can increase the tendency for deviant behavior, including drug abuse (Alipour et al., 2026).

These findings align with research in Indonesia showing that individual factors such as age, gender, education level, and knowledge of the dangers of narcotics influence substance use behavior in adolescents (Hidayati, 2024; Sirait et al., 2025). Furthermore, psychological conditions such as emotional instability, high curiosity, and a tendency to try new things are also key motivating factors in drug abuse behavior (Fadillah & Effendi, 2026; Anjani & Hutasoit, 2022). In some cases, low education levels and a lack of understanding of the risks of substance use further increase adolescents' vulnerability to such behavior (Sembiring & Bara, 2026). Therefore, individual factors can be viewed as the foundation of vulnerability that determines the extent to which adolescents are able to control themselves in the face of environmental pressures.

Family Factors

Family factors are a major determinant of adolescent behavior, both as protective and risk factors. Research shows that lack of parental supervision, family conflict, and the presence of

DOI: https://doi.org/10.71435/736869

family members who use substances are the most frequently identified factors. This suggests that the quality of family relationships has a direct influence on adolescent behavior.

The lack of adequate supervision leaves adolescents with greater freedom without control, increasing the likelihood of exposure to risky environments (Basyoni et al., 2021). Furthermore, ineffective communication within the family can hinder the internalization of values and norms, leaving adolescents without a strong foundation for decision-making. This situation is exacerbated in families with high conflict or family dysfunction, where the home environment can become a source of stress for adolescents (Rajamani et al., 2024).

The presence of family members who use substances also serves as a role model for behavior. According to social learning theory, individual behavior is influenced by observations of the immediate environment, especially the family. Therefore, adolescents growing up in families with a history of substance use are at higher risk of adopting similar behaviors (Hunduma et al., 2024). Furthermore, family economic factors also contribute, where low economic conditions can increase psychosocial stress and limit access to education and optimal supervision (Kessy et al., 2025).

These findings are supported by research in Indonesia showing that suboptimal family functioning, such as lack of parental supervision and weak communication within the family, contributes to an increased risk of drug use in adolescents (Hidayati, 2024). Furthermore, the presence of family members who use substances and family disharmony have also been shown to increase adolescents' vulnerability to drug abuse behavior (Fadillah & Effendi, 2026; Anjani & Hutasoit, 2022). Other factors, such as low family socioeconomic status, also increase the risk, as they can influence parenting patterns and limit the ability to provide adequate supervision and support (Sembiring & Bara, 2026).

Thus, the family plays a strategic role in preventing drug use. A supportive and communicative family environment can be a strong protective factor, while conversely, an unstable family environment can significantly increase adolescents' vulnerability.

Social and Environmental Factors

Social and environmental factors are among the most dominant factors influencing drug use behavior in adolescents. These two factors are interrelated and inseparable, as the social environment in which adolescents interact also shapes their behavior and decisions regarding substance use.

Adolescents tend to have a strong need for acceptance within their social groups, often adapting their behavior to group norms, including regarding substance use. In this context, peer pressure can be both explicit and implicit, with adolescents feeling the need to conform to group behavior to maintain their social status (Okpako et al., 2025). This explains why the presence of peers who use substances is one of the strongest predictors of drug use.

In addition to being a source of influence, peers also serve as a primary source of access to substances. Research shows that most adolescents obtain substances from their social circles, suggesting the role of social networks in substance distribution (Çınar et al., 2021). Furthermore, the normalization of substance use within social groups can lower the perception of risk, making such behavior perceived as normal (Oladeji et al., 2025). Social factors are also related to the school environment and broader social interactions. Adolescents with low attachment to school or experiencing difficulties with social adjustment tend to be more vulnerable to deviant behavior (Okpako et al., 2025).

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Furthermore, environmental factors related to easy access to substances are factors that consistently increase the risk of drug use. Adolescents in environments with high availability of substances are more likely to try and use them (Çınar et al., 2021). Furthermore, economic factors and the price of substances also influence the level of accessibility, with lower prices increasing the likelihood of consumption (Oladeji et al., 2025). The residential environment also plays a role in shaping adolescent behavior. Environments with low social control or high crime rates tend to increase exposure to risky behavior. Furthermore, developments in technology and social media have also expanded exposure to information and norms related to substance use (Hunduma et al., 2024).

Research in Indonesia also shows a similar pattern, where peer influence and social environment are very dominant factors in driving drug use behavior in adolescents (Hidayati, 2024). Furthermore, environmental conditions, such as urban areas or environments with low levels of social control, also increase this risk (Sembiring & Bara, 2026). The ease of obtaining substances, both through friendship networks and the surrounding environment, and the perception that substance use is commonplace, further strengthen adolescents' tendency to experiment (Sirait et al., 2025; Anjani & Hutasoit, 2022).

Thus, social and environmental factors act as a context that reinforces other risk factors. Drug use in adolescents generally does not occur due to a single factor, but rather results from the interaction between social influences, environmental conditions, and individual vulnerability.

Dominant Risk Factor Analysis

Based on frequency analysis, social and environmental factors were the most dominant, appearing in 21 of the 23 articles. This dominance indicates that peer influence and environmental conditions play a stronger role than other factors in determining adolescent drug use behavior. This finding aligns with previous research that suggests social interaction is a key determinant of adolescent behavior, particularly in the context of risky behavior (Nawi et al., 2021). Social influences are not only direct but also interact with individual and family factors, thus amplifying the risk of substance use. Thus, social factors can be viewed as a key factor that needs to be the primary focus of preventive interventions, without neglecting the role of other interacting factors.

Interpretation Based on Social, Cultural, and Religious Contexts

The analysis results indicate that social and environmental factors are the most dominant risk factors for drug use in adolescents, appearing in 21 of the 23 articles. This dominance is inextricably linked to the social, cultural, and religious contexts that shape adolescent interaction patterns in each country. Therefore, the variation in risk factors found in this study is influenced not only by individual characteristics but also by the surrounding sociocultural context.

From a cultural perspective, differences in social values and norms between countries influence how substance use behavior is perceived and accepted in society. In Western countries, the use of alcohol and certain other substances tends to be more integrated into social life, resulting in a relatively higher level of acceptance of such behavior. This situation reinforces the influence of social factors, particularly peer influence, as a primary determinant of drug use. Conversely, in Asian countries with collectivist cultures and stricter social norms, drug use is more often associated with social pressure, academic stress, and family demands (Ju & Park, 2025). This suggests that culture not only influences behavioral norms but also shapes the sources of stress experienced by adolescents.

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Furthermore, religion also acts as a protective factor that can moderate the influence of other risk factors. High levels of religiosity are known to strengthen self-control and internalize moral values, thereby reducing the tendency for deviant behavior. Research shows that religiosity plays a significant role in reducing the influence of antisocial traits on drug use (Alipour et al., 2026). Thus, religion functions not only as an external norm but also as an internal mechanism influencing individual decision-making.

Religion also plays an important role as a protective factor. Adolescents with higher levels of religiosity generally have better self-control and can distinguish between acceptable and unacceptable behavior. This is supported by research showing that religiosity can mitigate the influence of antisocial traits on drug use (Alipour et al., 2026) and is also related to the formation of values and risk perceptions regarding deviant behavior (Anjani & Hutasoit, 2022). Thus, religious values not only function as external rules but also form an internal control factor for individuals.

On the other hand, in societies with higher levels of secularism, religion's role as a protective factor tends to be weaker. In these circumstances, other factors such as the social environment and psychological conditions become more dominant in influencing adolescent behavior. This is in line with the finding that in developed countries, individual and social factors are more prominent than family or environmental factors.

Socioeconomic factors also influence the distribution of risk factors. In developing countries, economic constraints, limited access to education, and weak social oversight contribute to family and environmental factors having a greater influence on drug use (Kessy et al., 2025). Conversely, in developed countries, despite relatively better economic conditions, psychosocial pressures such as stress, social isolation, and mental health problems are more dominant factors (Chen et al., 2025; Hansen et al., 2025).

Thus, the results of this study indicate that drug use among adolescents is a contextual phenomenon, where risk factors are influenced by the interaction between individual conditions and the sociocultural environment. Therefore, prevention strategies cannot be implemented uniformly but need to be tailored to the social, cultural, and religious characteristics of each region.

Research Limitations

This study has several limitations that need to be considered in interpreting the results obtained. Limitations related to the number and scope of articles analyzed. Although this study used the most recent articles from 2021-2025, the number of articles meeting the inclusion criteria was limited to 18 studies. This may affect the generalizability of the results, given that not all regions or adolescent populations worldwide were proportionally represented in this study. There were differences in research methods across the articles analyzed. Variations in research designs, such as cross-sectional, cohort, qualitative studies, and literature reviews, led to differences in data collection and analysis approaches. These differences have the potential to lead to heterogeneity in the results, making direct comparisons between studies difficult. This study has limitations in terms of data availability and completeness. Not all articles presented detailed quantitative data regarding the proportion or number of cases for each risk factor, so the aggregate analysis was more descriptive in nature. Furthermore, some studies did not specifically separate adolescent age groups or did not group risk factors uniformly, requiring further interpretation in the analysis process. Based on these limitations, the results of this study need to be understood as a general description of the risk factors for drug use in adolescents,

DOI: https://doi.org/10.71435/736869

and further research is still needed with a more uniform design and more comprehensive data to obtain more accurate results.

Conclusion

Based on the results of a systematic review of 18 scientific articles, it can be concluded that the risk factors for narcotics, psychotropics, and addictive substances (NAPZA) use in adolescents consist of four main categories: individual, family, social, and environmental factors. The results of the scoring-based analysis indicate that social factors are the most dominant factor, appearing in 16 articles, followed by individual and family factors in 15 articles each, and environmental factors in 11 articles. Social factors, particularly peer influence, have been shown to play the strongest role in encouraging drug use behavior in adolescents. In addition, individual factors such as psychological disorders, family factors such as lack of parental supervision, and environmental factors such as easy access to substances also contribute to increasing the risk of use. These findings also indicate variations in risk factors between countries influenced by social, cultural, and economic conditions. Thus, drug use in adolescents is a multifactorial, contextual phenomenon, so prevention efforts need to be carried out comprehensively, considering social factors as the focus without ignoring other factors.

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