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Reforming Legal Sanctions Through Rehabilitation for Adolescent Drug Users in Indonesia

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ABSTRACT

This research is motivated by the persistence of methamphetamine and psychotropic drug abuse among adolescents in Indonesia, which has serious consequences for health, social integration, and the future of the younger generation, and which increasingly intersects with digital environments and data-driven governance. The purpose of this study is to analyze the effectiveness of legal sanctions against adolescent users and to examine how rehabilitation, data protection, and digital governance arrangements shape that effectiveness. **This study employs** a qualitative, normative juridical approach based on a review of legislation, scholarly literature, institutional reports, and previous research, including the legal framework on narcotics, juvenile justice, child protection, personal data protection, and electronic information. **The findings** indicate that the effectiveness of legal sanctions is constrained by limited rehabilitation access, inadequate preventive education, family and environmental influences, social stigma, and weak governance of adolescents' personal data and digital records. **The analysis further** suggests that criminal sanctions alone cannot address the health and social dimensions of adolescent substance use, and that digital platforms and information systems create both risks and opportunities that current legal arrangements only partially address. **Accordingly**, legal policy should integrate proportionate legal accountability with accessible rehabilitation, community-based prevention, accountable platform governance, and safeguards for adolescents' data and human oversight of any data-driven case assessment, consistent with child protection principles. This study is documentary in scope and does not establish causal effects. Its contribution is an integrated legal-policy framework linking sanction effectiveness with digital human rights, data governance, and institutional accountability in support of SDG 3 and SDG 16.

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1. INTRODUCTION

Drug abuse, particularly methamphetamine and psychotropic drugs, among adolescents in Indonesia is a crucial issue that continues to increase and requires serious attention from various parties [1]. This phenomenon not only impacts the physical and mental health of individuals but also has implications for social and economic stability, as well as the nation's future generations. Adolescent drug abuse remains a significant public health and legal policy concern in Indonesia because its consequences extend beyond individual health

to family relationships, educational participation, social integration, and future opportunities [2]. TAccording to national survey data from the National Narcotics Agency (BNN), the estimated number of drug users in Indonesia rose from approximately 4.53 million in 2019 to 4.83 million in 2021 [3]. These figures cover the general population rather than adolescents specifically, and they should be read together with prevalence rates and the survey methodology used [SITASI BNN]. Comparative experience from other jurisdictions shows that criminal sanctions, treatment-oriented interventions, rehabilitation accessibility, and post-treatment support are combined in different ways, so a single policy model should not be assumed to produce equivalent outcomes across legal systems [4]. This evidence provides a basis for evaluating whether Indonesia's current approach adequately balances legal accountability, rehabilitation, and adolescent protection [5]. This is caused by environmental factors, social pressures, and a lack of education about the dangers of drugs. In the context of global development, this problem is also closely related to the Sustainable Development Goals (SDGs), particularly Goal 3, Good Health and Well-being, which emphasizes the importance of ensuring healthy lives and supporting well-being for all ages [6]. Furthermore, this issue is also relevant to SDG Goal 16, Peace, Justice, and Strong Institutions, which highlights the importance of effective, transparent, and equitable law enforcement [7]. Indonesia's drug-control framework combines criminal sanctions, rehabilitation provisions, and institutional responsibilities in addressing narcotics abuse [8]. Evaluating the effectiveness of this framework requires attention not only to the substance of legal rules but also to their implementation, coordination among relevant institutions, and the accessibility of rehabilitation services for adolescents [9]. This perspective connects criminal law analysis with public policy and accountable, human-centered justice governance. However, the effectiveness of this policy remains a matter of debate, particularly when users, who are largely victims, are treated as perpetrators [10]. In this context, the concept of the effectiveness of legal sanctions is crucial for further study, particularly in relation to efforts to protect the younger generation and achieve SDGs [11].

Although drug-related activities in Indonesia are governed by strict legal provisions through various laws and regulations, the implementation of legal sanctions for adolescent methamphetamine and psychotropic drug users still faces various challenges [12]. One major issue is the dominance of a repressive approach that emphasizes criminal penalties over rehabilitation [13]. This approach is considered ineffective in providing a deterrent effect and rehabilitation for adolescent users, who are essentially victims of substance abuse [14]. Furthermore, other issues include overcrowding in correctional institutions, a lack of adequate rehabilitation facilities, and the social stigma attached to former users. These conditions indicate a gap between the objectives of the law and the reality of implementation on the ground [15]. Therefore, it is crucial to evaluate the extent to which the legal sanctions applied effectively and sustainably address the problem of drug abuse among adolescents. Although previous research has examined narcotics law enforcement, drug rehabilitation, and substance-use prevention, these strands of literature do not necessarily explain how legal sanctions and rehabilitation interact in cases involving adolescent methamphetamine and psychotropic drug users in Indonesia [16]. The specific gap addressed by this study is the need to synthesize the normative legal framework, the implementation challenges of punitive and rehabilitative approaches, and the governance of adolescents' data and digital environments within one analysis. Unlike studies that examine legal provisions or treatment interventions separately, this study brings these dimensions together to assess the limitations of sanction-centered responses and to identify areas for policy improvement [17]. Its contribution lies in an integrated legal-policy analysis that connects legal effectiveness with rehabilitation access, prevention, and social reintegration. This contribution is analytical and policy-oriented rather than a claim of a new empirical model [18]. This study addresses this gap by integrating a normative legal analysis with a comparative discussion of repressive sanctions and rehabilitative interventions [19]. Its contribution lies in identifying the legal and implementation-related factors that may limit the effectiveness of punitive measures and in formulating policy recommendations that prioritize adolescent protection, rehabilitation, and sustainable prevention in line with SDG 3 and SDG 16 [20].

The problem also has a digital dimension that is rarely examined in narcotics law scholarship. Adolescents are exposed to narcotics-related content, offers, and transactions through online platforms and messaging services, while enforcement, assessment, and rehabilitation increasingly rely on electronic records and interagency information systems [SITASI]. These developments raise questions that fall within the field of digital governance: how platform accountability is allocated, how adolescents' sensitive personal data in criminal and rehabilitation proceedings is protected, how a digital footprint may reinforce stigma and obstruct social reintegration, and whether any data-driven or automated case assessment remains subject to human oversight and the principle of the best interests of the child [SITASI]. In Indonesia, these questions engage Law Number 27

of 2022 on Personal Data Protection, Law Number 11 of 2008 on Electronic Information and Transactions and its amendments, and Law Number 11 of 2012 on the Juvenile Criminal Justice System, alongside Law Number 35 of 2009 on Narcotics.

Building on these challenges, this study examines the effectiveness of legal sanctions against adolescent drug users in Indonesia, compares punitive and rehabilitative approaches, and identifies how data protection and digital governance arrangements can strengthen prevention, recovery, and legal protection [21].

- First, how effective is the application of legal sanctions against methamphetamine and psychotropic drug users among adolescents in Indonesia in reducing drug abuse?
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- Second, how do repressive and rehabilitative approaches differ in their impact on adolescents?
-
- Third, how do personal data protection, platform accountability, and data-driven case assessment affect the effectiveness, fairness, and reintegration outcomes of these approaches?

Third, this study examines whether existing legal and governance arrangements, including those governing adolescents' personal data and digital environments, can provide sustainable solutions with socially and legally measurable impacts. It also seeks to identify more adaptive policy alternatives that combine law enforcement with prevention, education, rehabilitation, and accountable digital governance. The results are expected to contribute to legal policies that are more responsive to adolescents' needs and that support the achievement of sustainable development goals, particularly a healthy, safe, and just society [22].

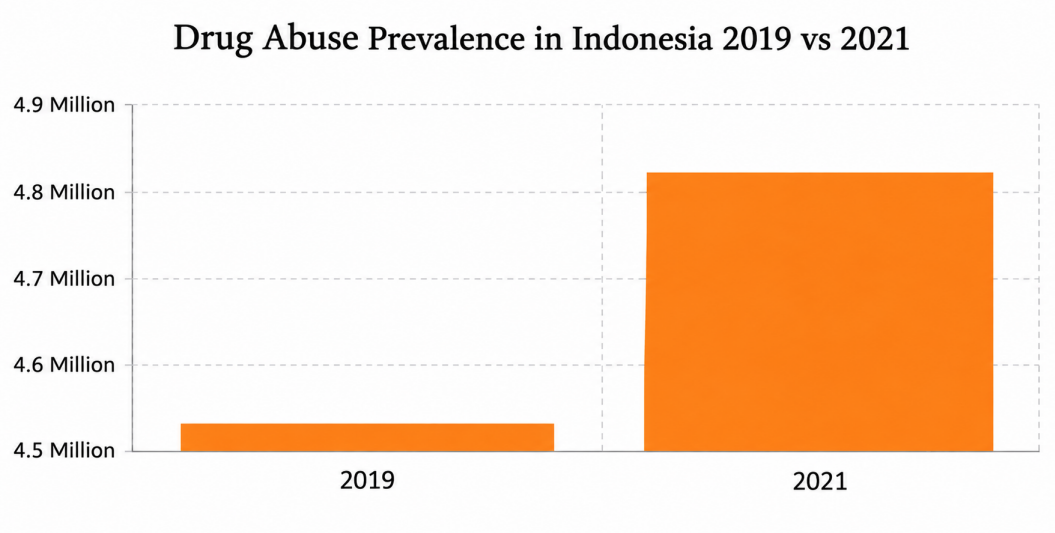


Figure 1. Estimated Number of Drug Users in Indonesia, 2019 and 2021

Figure 1 shows that the estimated number of drug users in Indonesia increased from approximately 4.53 million in 2019 to 4.83 million in 2021. Because the figure reports absolute numbers for the general population rather than adolescent prevalence, it indicates the continuing scale of the problem but cannot by itself show trends among adolescents. This underscores the need for age-disaggregated and openly accessible data to support evidence-based policy and its evaluation [23].

2. LITERATURE REVIEW

The literature review in this study focuses on theoretical and empirical understanding of the effectiveness of legal sanctions against drug users, particularly methamphetamine and psychotropic drugs among adolescents, by integrating legal, criminological, and public health perspectives [24]. Conceptually, narcotics

and psychotropic drugs are substances with high addictive potential that can cause physical and psychological dependence, making their use without medical supervision categorized as illegal in many countries, including Indonesia [25]. The primary regulation governing this is Law Number 35 of 2009 concerning Narcotics, which recognizes users as both offenders and victims requiring rehabilitation as perpetrators of criminal acts and as victims in need of rehabilitation. The literature shows that the legal approach to drug users globally tends to shift from a punitive model to a rehabilitative model, particularly for vulnerable groups such as adolescents [26]. This is supported by various studies confirming that a public health-based approach is more effective in reducing dependence rates than a repressive approach that focuses solely on imprisonment. Deterrence theory and labeling theory offer complementary but distinct explanations of the limitations of punitive responses to adolescent drug use. Deterrence theory emphasizes the preventive function of sanctions, particularly the expectation that legal consequences may discourage prohibited behavior [27]. However, the practical effect of punishment cannot be inferred from the severity of sanctions alone, especially when adolescent substance use is influenced by peer relationships, family circumstances, and social environments [28]. Labeling theory, in contrast, draws attention to the possible consequences of stigmatizing young people as criminals, including barriers to social reintegration and the reinforcement of negative social identities. Meanwhile, Friedman's legal systems theory provides an institutional perspective by emphasizing the interaction between legal substance, institutional structure, and legal culture [29]. Taken together, these perspectives suggest that legal effectiveness should be assessed through both the operation of sanctions and the availability of rehabilitation, institutional coordination, and social support [30]. Nevertheless, the theories explain different dimensions of the problem and should not be treated as interchangeable or as direct empirical proof that rehabilitation always produces better outcomes [31].

Therefore, a more humanistic approach through rehabilitation and social reintegration is considered more relevant in addressing cases of drug abuse among adolescents. Previous research has also highlighted that countries that prioritize decriminalization policies for drug users, while still taking firm action against illicit trafficking networks, have shown more positive results in reducing abuse rates and improving the quality of life of former users [32]. Furthermore, in the context of legal effectiveness, several indicators frequently used in the literature include the law's ability to provide a deterrent effect, reduce the rate of violations, and create justice and social welfare [33]. However, this effectiveness is determined not only by the substance of the law but also by the structure and culture of the law, as explained in Lawrence M. Friedman's legal systems theory [34]. In the Indonesian context, despite the availability of comprehensive regulations, implementation still faces various obstacles, such as limited rehabilitation facilities, lack of coordination between institutions, and social stigma against drug users [35]. This is reinforced by research showing that the majority of drug users in correctional institutions are low-to-moderate addicts who should be more appropriately treated with rehabilitation than imprisonment. Prison overcrowding also indicates that the existing legal approach is not optimal in addressing the problem systematically [36].

From a digital governance perspective, three bodies of law and scholarship are relevant. First, personal data protection law treats information about children and information relating to criminal proceedings or health as requiring heightened safeguards, which directly affects how records of adolescent drug users are collected, shared, and retained. Second, platform governance literature examines how intermediaries are held accountable for illegal content and transactions facilitated through their services, which is relevant to adolescents' exposure to drug-related offers online. Third, scholarship on algorithmic accountability and automated decision-making emphasizes transparency, explainability, and human oversight where data-driven tools inform decisions affecting individuals' rights, particularly children. These perspectives complement Friedman's legal systems theory by showing that legal structure and legal culture are now partly mediated by information systems and digital environments

In relation to the SDGs, particularly Goal 3 (Good Health and Well-being) and Goal 16 (Peace, Justice, and Strong Institutions), the literature emphasizes the importance of a multidisciplinary approach in addressing drug abuse [37]. Prevention efforts through education, raising public awareness, and strengthening rehabilitation systems are integral to achieving sustainable development targets [38]. Recent research also shows that integrating legal policies and public health-based approaches can produce more effective and sustainable results [39]. Therefore, this literature review confirms that the effectiveness of legal sanctions against methamphetamine and psychotropic drug users among adolescents cannot be viewed in isolation but must be analyzed holistically, considering legal, social, and health factors. This approach is expected to produce more adaptive, inclusive policy recommendations oriented toward protecting the younger generation as the nation's future

assets [40].

3. RESEARCH METHODS

This study was designed to provide a comprehensive understanding of the effectiveness of legal sanctions against methamphetamine and psychotropic drug users among adolescents in Indonesia by integrating legal, social, and public policy approaches [41]. This study adopts a qualitative descriptive-analytical design and a normative juridical approach, using statute, conceptual, and comparative approaches. The legal materials examined include Law Number 35 of 2009 on Narcotics, Law Number 11 of 2012 on the Juvenile Criminal Justice System, the child protection legislation, Law Number 27 of 2022 on Personal Data Protection, and Law Number 11 of 2008 on Electronic Information and Transactions and its amendments, together with scholarly literature and documented institutional evidence on criminal sanctions, rehabilitation, prevention, and the handling of adolescents' data. The study compares the legal rationale and implementation challenges of punitive and rehabilitative approaches and then examines how data protection and digital governance arrangements bear on each [42]. Its conclusions are limited to the scope and quality of the documentary evidence examined. A qualitative approach was chosen because it explores the meanings, interpretations, and institutional contexts of drug-related legal responses, which cannot be optimally explained through a quantitative approach alone.

The data in this study consist of primary and secondary legal materials. Primary legal materials are statutes and regulations. Secondary materials include scientific journals, official reports from government agencies (e.g., the National Narcotics Agency), policy documents, and previous research on drug abuse, rehabilitation, personal data protection, and the effectiveness of legal sanctions. Data were collected through literature study and documentation. No interviews were conducted, and no adolescent participants were involved. Source triangulation was used to examine the consistency of information across the legal framework, scholarly publications, and institutional reports. Where information was inconsistent, the analysis considered the origin, publication date, methodological scope, and relevance of each source rather than treating agreement as proof of accuracy. The analysis retained distinctions between documented facts and the researchers' interpretations. This procedure was intended to strengthen the credibility and traceability of the findings while acknowledging the limitations of the available evidence.

The data analysis technique in this study employed an interactive analysis model, encompassing three main stages, data reduction, data presentation, and conclusion drawing. In the data reduction stage, researchers selected, focused, and simplified data relevant to the research objectives. Next, the reduced data was presented in descriptive narrative form, facilitating the understanding of patterns and relationships between variables. The final stage was inductive conclusion drawing based on the findings obtained during the research process. Furthermore, the analysis employed a comparative approach to compare the effectiveness of repressive legal sanctions and rehabilitative approaches in addressing adolescent drug use. This approach is expected to provide a more comprehensive picture of the advantages and disadvantages of each policy, as well as their implications for reducing drug abuse.

To support validity and reliability, the researchers used source triangulation and an audit trail that documents the selection of legal materials and literature so that the process can be traced by others. Because the study relies exclusively on publicly available legal and documentary sources and involves no human participants, no interviews, informed consent, or member checking were required.

4. RESULTS AND DISCUSSION

The findings are presented in relation to the three research questions: the effectiveness of legal sanctions against adolescent methamphetamine and psychotropic drug users, the differences between repressive and rehabilitative approaches, and the role of data protection and digital governance in shaping both. the effectiveness of legal sanctions against adolescent methamphetamine and psychotropic drug users, and the differences between repressive and rehabilitative approaches. As shown in Figure 1, the number of drug users in Indonesia increased from approximately 4.53 million in 2019 to 4.83 million in 2021. This trend indicates that drug abuse remains a continuing challenge despite the existence of strict legal provisions. The analysis of legislation, scholarly literature, and institutional reports points to three recurring themes: the limits of a sanction-centered response, the implementation obstacles that affect rehabilitation, and the social and institutional conditions that shape recovery and reintegration.

The reviewed literature and available institutional data suggest that the effectiveness of repressive legal sanctions should be assessed alongside rehabilitation access, prevention programs, and the social conditions influencing adolescent drug use. However, the available evidence does not by itself establish a causal relationship between imprisonment and changes in adolescent drug abuse rates. A more reliable assessment therefore requires clearly documented case evidence, comparable statistical indicators, and information on rehabilitation outcomes, including treatment completion and recidivism where such data are available.

With regard to the first research question, the findings indicate that the effectiveness of legal sanctions against adolescent drug users is constrained by several factors, namely limited access to rehabilitation, inadequate preventive education, family and environmental influences, and the social stigma associated with drug use. Adolescent substance use is influenced by peer relationships, family circumstances, and social environments, so the severity of a sanction alone cannot explain whether it prevents drug use. Lack of family supervision and minimal legal understanding among adolescents further reduce the likelihood that sanctions will operate as an effective deterrent. These findings suggest that criminal sanctions alone cannot adequately address the health and social dimensions of adolescent substance use.

The comparison between punitive and rehabilitative approaches highlights different objectives in responding to adolescent drug use. Criminal sanctions emphasize legal accountability and deterrence, whereas rehabilitation focuses on treatment, recovery, and social reintegration. For adolescents whose cases meet the applicable legal criteria for rehabilitation, an approach that integrates treatment with appropriate legal accountability may better address the underlying health and social factors associated with substance use. However, the relative effectiveness of these approaches should not be assumed without comparable evidence on treatment outcomes, recidivism, and long-term reintegration. Policy evaluation should therefore consider both legal compliance and measurable recovery outcomes.

The comparison between the two approaches also needs to be read against Indonesia's legal framework. Law Number 35 of 2009 concerning Narcotics recognizes users as both offenders and victims who require rehabilitation. In practice, however, the dominance of a repressive approach that emphasizes criminal penalties over rehabilitation creates a gap between the objectives of the law and its implementation. This gap is most visible when adolescents, who are largely victims of substance abuse, are treated as perpetrators. The literature also notes that the majority of drug users in correctional institutions are low-to-moderate addicts who would be more appropriately treated through rehabilitation than imprisonment, and that prison overcrowding indicates the existing approach is not optimal in addressing the problem systematically. Taken together, these conditions support the need for case assessment that distinguishes adolescents who warrant criminal accountability from those who meet the applicable legal criteria for rehabilitation.

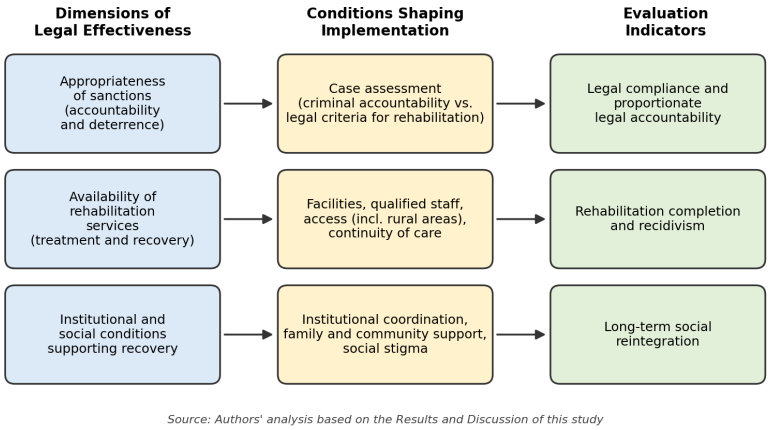


Figure 2. Framework of Legal Effectiveness in Addressing Adolescent Drug Use

Figure 2 summarizes the three interrelated dimensions of legal effectiveness identified in this study the appropriateness of sanctions, the availability of rehabilitation services, and the institutional and social conditions supporting recovery. The appropriateness of sanctions depends on case assessment that distinguishes circumstances warranting criminal accountability from those meeting the applicable legal criteria for rehabilitation. The availability of rehabilitation services depends on facilities, qualified personnel, accessibility,

particularly in rural areas, and continuity of care. Institutional and social conditions depend on institutional coordination, family and community support, and the level of social stigma. Each dimension is evaluated through different indicators, namely legal compliance and proportionate accountability, rehabilitation completion and recidivism, and long-term social reintegration. The framework is an analytical interpretation of the documentary evidence and does not represent a causal model.

The obstacles to rehabilitation identified in this study are both structural and social. Structurally, limited facilities, a shortage of professional staff, and poor accessibility, particularly in rural areas, restrict the ability of rehabilitation policy to reach adolescents who need it. Socially, stigma against drug users continues after treatment and creates barriers to returning to education and community life. These findings show that the availability of a rehabilitation provision in law does not automatically translate into accessible and continuous services. For this reason, the evaluation of rehabilitation policy should consider not only whether rehabilitation is permitted but also whether services are available, coordinated across institutions, and sustained after treatment, as illustrated in Figure 2.

The findings should be interpreted through the complementary perspectives of deterrence theory, labeling theory, and restorative justice. From the perspective of deterrence theory, criminal sanctions may communicate legal boundaries and reinforce accountability, however, their effectiveness in preventing adolescent drug use cannot be established solely from the existence or severity of punishment. Labeling theory highlights the risk that criminal stigma may create additional barriers to education, employment, and social reintegration, potentially undermining recovery. Restorative justice provides a framework for considering recovery, accountability, and reintegration alongside the protection of affected individuals and the community. In the context of adolescent drug cases, these perspectives support a differentiated legal response in which rehabilitation is considered when permitted by applicable law and appropriate to the individual's circumstances. Because this study relies on documentary analysis, these theoretical connections should be understood as an interpretation of the available evidence rather than proof of causal effects.

Furthermore, the results of this study also support the importance of synergy between various parties, such as the government, educational institutions, families, and communities, in creating a conducive environment for preventing drug abuse. In relation to the SDGs, these findings reinforce the importance of integrating health policies and law enforcement in achieving Goal 3 (Good Health and Well-being) and Goal 16 (Peace, Justice, and Strong Institutions). Thus, more adaptive and evidence-based policy reforms are needed, emphasizing not only punishment but also ongoing prevention, rehabilitation, and education efforts to protect young people from the threat of drugs.

Table 1. Comparison of Punitive and Rehabilitative Approaches to Adolescent Drug Use

Aspect	**Punitive (Repressive) Approach**	**Rehabilitative Approach**
Primary Objective	Legal accountability and deterrence	Treatment, recovery, and social reintegration
Main Focus	Imposition of criminal sanctions, including imprisonment	Medical and social intervention for users, particularly adolescents
Theoretical Perspective	Deterrence theory	Labeling theory and restorative justice
Main Limitations Identified	Deterrent effect cannot be inferred from severity of punishment alone; risk of stigma as a barrier to education, employment, and reintegration; prison overcrowding	Limited facilities, lack of professional staff, and poor accessibility, particularly in rural areas
Supporting Conditions	Appropriate case assessment	Family and social support, institutional coordination, and continuity of care
Evaluation Indicators	Legal compliance and proportionate legal accountability	Rehabilitation completion, recidivism, and long-term social reintegration
Digital Governance and Data Protection	Criminal records and proceedings involving minors generate sensitive data; weak safeguards may prolong stigma	Health and treatment records are sensitive data requiring lawful processing, restricted access, and continuity across institutions

As shown in Table 1, the two approaches serve different objectives and face different implementation challenges. Punitive measures primarily address legal accountability and deterrence, whereas rehabilitation addresses treatment needs and social reintegration. The table does not imply that one approach is inherently superior; its effectiveness depends on appropriate case assessment, access to services, institutional coordination, and sustained support. Accordingly, a differentiated legal response is needed in which rehabilitation is considered when permitted by applicable law and appropriate to the individual's circumstances.

In response to the second research question, the findings suggest that repressive and rehabilitative approaches differ in their objectives, in the risks they carry, and in the evidence needed to evaluate them. A repressive approach emphasizes accountability and deterrence but carries the risk of stigma and may limit access to education, employment, and social reintegration. A rehabilitative approach addresses treatment and reintegration but depends on adequate facilities, qualified personnel, and continuity of care. The literature indicates that a public health-based approach is more effective in reducing dependence than imprisonment alone, and that countries prioritizing decriminalization of users while still acting firmly against illicit trafficking have reported more positive results. These findings should be interpreted cautiously, because this study relies on documentary analysis and does not establish a causal relationship between punitive sanctions and changes in drug abuse rates. Future evaluation should therefore use comparable indicators, including treatment completion, recidivism, and long-term social reintegration, to assess how legal accountability and rehabilitation can be combined in a proportionate way.

5. MANAGERIAL IMPLICATIONS

The findings of this study provide important implications for policymakers, law enforcement agencies, rehabilitation institutions, educational institutions, families, and community organizations in addressing methamphetamine and psychotropic drug abuse among adolescents in Indonesia. Policymakers and law enforcement agencies should implement a proportionate and differentiated approach that considers legal accountability while prioritizing rehabilitation for adolescents who meet the applicable legal criteria. This requires clear assessment procedures, consistent implementation across jurisdictions, and the use of imprisonment only as a last resort so that adolescents are not exposed to the long-term consequences of criminalization, such as stigma and limited access to education and employment. Rehabilitation institutions should strengthen service accessibility, particularly in rural and underserved areas, improve the availability of qualified professionals, and ensure continuity of medical and social support to facilitate recovery and prevent relapse. Educational institutions and community organizations should enhance preventive education and legal awareness programs to help adolescents understand the risks and consequences of drug abuse, while also providing safe spaces for early intervention and peer support. Furthermore, families should be actively involved in providing supervision, emotional support, and a supportive environment for recovery, while collaborative efforts among law enforcement agencies, health services, social services, schools, and community organizations are necessary to reduce social stigma and facilitate adolescents' social reintegration. In addition, institutions that handle adolescent cases should adopt adequate digital governance and data protection safeguards, because criminal proceedings and treatment records contain sensitive information, and weak safeguards may prolong stigma and hinder reintegration. The effectiveness of these measures should be evaluated through indicators such as rehabilitation completion, recidivism, and long-term social reintegration, with regular monitoring that enables decision-makers to develop evidence-informed policies that support adolescent protection and contribute to the achievement of SDG 3 (Good Health and Well-being) and SDG 16 (Peace, Justice, and Strong Institutions).

6. CONCLUSION

This study highlights the need to evaluate the effectiveness of legal sanctions against adolescent methamphetamine and psychotropic drug users through a framework that considers legal accountability, rehabilitation, prevention, and social reintegration. Its contribution to legal policy reform in Indonesia lies in identifying the implementation challenges that may limit the effectiveness of sanction-centered responses, in showing that data protection and digital governance are part of that effectiveness, and in outlining complementary measures for improving adolescent protection.

First, case assessment and the application of sanctions should distinguish between circumstances that warrant criminal accountability and those that meet the applicable legal criteria for rehabilitation. Second,

rehabilitation services should be strengthened through adequate facilities, qualified personnel, institutional coordination, and continuity of care. Third, prevention and reintegration policies should involve families, educational institutions, and communities to address social stigma and support recovery. These recommendations should be implemented consistently with applicable legislation and safeguards for adolescents. Fourth, adolescents' personal data in assessment, prosecution, and rehabilitation should be protected through clear standards on retention, access, and sharing, platform accountability for child protection should be clarified, and any data-driven assessment should remain under human oversight.

The study is limited by its qualitative and documentary scope, and its findings do not establish a causal relationship between punitive sanctions and changes in drug abuse rates. Further research should examine comparable outcome measures, including treatment completion, recidivism, and long-term social reintegration. Such evidence would support more rigorous evaluation of legal and rehabilitative interventions and help policymakers develop proportionate, evidence-informed responses aligned with SDG 3 and SDG 16.

7. DECLARATIONS

7.1. About Authors

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7.2. Author Contributions

Conceptualization: EM and ZH; Methodology: AB and DA; Software: EM and DA; Validation: ZH and AB; Formal Analysis: ZH and DA; Investigation: AB and EM; Resources: DA; Data Curation: EM and AB; Writing Original Draft Preparation: AB and ZH; Writing Review and Editing: EM and ZH; Visualization: DA; All authors, EM, ZH, AB and DA have read and agreed to the published version of the manuscript.

7.3. Data Availability Statement

The data presented in this study are available on request from the corresponding author.

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7.5. Institutional Review Board Statement

Not applicable.

7.6. Informed Consent Statement

Not applicable.

7.7. Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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