

## Research Article



# Characteristics of Child Perpetrators of Violence with Substance Use Disorders at Grhasia Psychiatric Hospital, Yogyakarta

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## ABSTRACT

**Background:** Children who perpetrate violence in the context of substance use disorders constitute a high-risk subgroup requiring a comprehensive understanding of their clinical and social characteristics to inform effective prevention and intervention strategies. In Indonesia, evidence describing the profiles of child perpetrators of violence within specialized mental health services, including psychiatric hospitals, remains limited. This study aimed to describe the demographic and clinical characteristics, patterns of substance use, and associated risk factors among child perpetrators of violence treated or examined at Grhasia Psychiatric Hospital between 2018 and 2022.

**Methods:** A retrospective descriptive study was conducted using medical records of child patients ( $\leq 18$  years) identified as perpetrators of violent acts and diagnosed with substance use disorders at Grhasia Psychiatric Hospital from 2018 to 2022. Variables analyzed included age, sex, and types of substances used.

**Results:** Of the eligible cases, most child perpetrators of violence with substance use disorders were male adolescents aged 11–18 years (82.35% and 94.11%, respectively). These findings indicate that male adolescents represent the most vulnerable group for involvement in violence associated with substance use disorders within psychiatric service settings.

**Conclusion:** Substance-related violence among adolescents represents a substantial public health burden. The predominance of male adolescents among violent child perpetrators underscores the need for targeted, multidisciplinary prevention and intervention strategies, alongside strengthened psychiatric health information systems to support effective clinical management and evidence-based policy development.

**Keywords:** Children; Substance use disorders; Violence

## INTRODUCTION

Substance use is closely linked to violent and aggressive behavior during adolescence. Adolescents who use psychoactive substances face a much higher risk of being involved in violence, both as perpetrators and victims. Large-scale epidemiological and criminological studies in the United States and other regions consistently show that alcohol, cannabis, and illegal drug use are strongly connected to physical fights, weapon carrying, and other types of interpersonal violence among youth.<sup>1,2</sup>

Beyond violence, adolescent substance use is closely connected to broader mental health and interpersonal issues. Population-based cohort studies show that substance use patterns, including exposure to peers who use substances, are linked to worse mental health outcomes, impaired social functioning, and more interpersonal violence. These findings highlight the need for early screening and comprehensive prevention and intervention efforts targeting substance use during adolescence.<sup>3,4</sup>

Evidence from systematic reviews and longitudinal studies further suggests that adolescent substance use does not develop in isolation, but results from the interaction of individual vulnerability, family adversity, and social environments. Factors such as impulsivity, childhood maltreatment, inadequate parental supervision, and exposure to substance-using peers have been consistently identified as predictors of starting substance use and subsequent violent behaviors behavior.<sup>5,6,7</sup> Moreover, longitudinal evidence suggests that early aggressive behavior in childhood may precede substance use initiation during adolescence, which in turn increases the risk of ongoing violent and antisocial behavior into adulthood.<sup>8</sup> This developmental trajectory emphasizes the importance of viewing substance-related youth violence as a preventable public health and medico-legal concern rather than just a criminal issue.

Substance use disorders (SUDs) are characterized by recurring patterns of psychoactive substance use that cause significant clinical impairment or distress. This includes physical dependence, psychological dependence, and social dysfunction. Worldwide, substance misuse continues to be a major public health issue, with the United Nations Office on Drugs and Crime reporting widespread illegal drug use across regions.<sup>9</sup> In Asia, substance use continues to increase, with Indonesia playing a significant role in this regional issue. National data show that the number of people using illegal substances in Indonesia rose from 4,534,744 in 2019 to 4,827,616 in 2021.<sup>10</sup>

The increasing prevalence of substance use disorders has raised significant public concern, as their impacts go beyond individual users to affect families and communities. This concern is reflected in Indonesian government regulations that recognize substance abuse as a problem with serious health, social, and legal consequences implications.<sup>11</sup> Violence is defined as an intentional act committed by an individual or group that causes physical, psychological, sexual, or economic harm, and it is categorized into multiple forms within international and national child protection frameworks. Violence related to substance use among children and adolescents should therefore be viewed as a global public health issue rather than just a behavioral problem. The World Health Organization stresses that violence is a leading cause of illness and death worldwide and is strongly connected to substance use through

mechanisms such as impaired judgment, increased emotional reactivity, and decreased impulse control.<sup>12</sup> Adolescents are a particularly vulnerable group, because exposure to psychoactive substances during key neurodevelopmental stages can increase the risk of violent behavior and long-term psychosocial issues harm.<sup>4,13</sup>

In Indonesia, violence remains a persistent social issue, as shown by the rising number of reported cases in recent years, many involving adolescents and young adults. The occurrence of violence is influenced by multiple interacting factors, including socioeconomic conditions, educational background, social environment, and lifestyle choices risks.<sup>14,15</sup> Substance use disorders are closely linked to mental health issues and violent behavior, especially among adolescents. National surveys conducted by the National Narcotics Board show a continuing increase in substance use prevalence population.<sup>10</sup> As a regional mental health referral center, Grhasia Psychiatric Hospital in Yogyakarta maintains medical records that provide valuable information on demographic characteristics, psychiatric diagnoses, substance use patterns, and histories of violent behavior among child and adolescent patients. Retrospective analysis of these records offers an important opportunity to characterize child perpetrators of violence with substance use disorders and to inform clinical management, rehabilitation planning, and evidence-based prevention strategies within both health and justice sectors systems.<sup>16</sup>

## METHODS

This study used a retrospective descriptive design analyzing medical records of child patients ( $\leq 18$  years) identified as perpetrators of violence and diagnosed with substance use disorders at Grhasia Psychiatric Hospital from 2018 to 2022. Data collection occurred from December 2023 to June 2024, utilizing a total sampling approach. Child perpetrators of violence were defined as patients documented in medical records as having committed physical, psychological, or sexual violence, based on classifications from the Integrated Service Center for the Empowerment of Women and Children (P2TP2A). Substance use disorders were identified based on clinical diagnoses recorded by psychiatrists in the medical charts, referencing DSM or ICD diagnostic criteria.

Inclusion criteria included patients aged  $\leq 18$  years with documented involvement in violent acts, a diagnosis or history of substance use disorders, and complete medical records. Records with incomplete data on violence history, substance use, age, or sex were excluded. Data were collected using a standardized form and validated by cross-checking demographic information, clinical notes, and psychiatric diagnoses. Cases missing key variables were excluded, and no data imputation was performed. Data were analyzed descriptively and shown as frequencies and percentages using statistical software such as Microsoft Excel or SPSS. This study received ethical approval from the Research Ethics Committee of the Faculty of Medicine, Universitas Islam Indonesia, under approval number 20/Ka.Kom.Et/70/KE/XI/2023.

## RESULTS

A total of 33 cases of violence were initially identified during the 2018–2022 period. However, after the selection process, only 17 cases met the criteria for analysis, while 16 cases were excluded due to incomplete medical records of child patients with addictive substance use.

Table 1 shows that the highest number of violence cases was recorded in 2018 and 2019, with 5 cases each (29.41%), followed by 4 cases in 2021 (23.52%), 2 cases in 2022 (11.76%), and 1 case in 2020 (5.88%).

**Table 1.** Number of Child Violence Cases at RSJ Grhasia in 2018–2022

Year	Number of cases (%)
2018	5 (29,41%)
2019	5 (29,41%)
2020	1 (5,88%)
2021	4 (23,52%)
2022	2 (11,76%)

The subjects were categorized by general characteristics to illustrate the distribution within the study population. The assessed parameters included age, sex, and type of addictive substances used, presented alongside the corresponding frequencies and percentages. Table 2 shows the general characteristics of child perpetrators of violence with a history of addictive substance Use. Of the 17 cases analyzed, the majority of violent acts were committed by individuals aged 11–18 years, accounting for 14 cases (82.35%), and most perpetrators were male, comprising 16 cases (94.11%).

**Table 2.** General Characteristics of Child Perpetrators of Violence with a History of Addictive Substance Use

Variable	Category	Substance Type	n	%
Age of perpetrator (years)	0–10	–	3	17.64
	11–18	–	14	82.35
Sex	Male	–	16	94.11
	Female	–	1	5.88
Type of addictive substance	Narcotics	Cannabis (Marijuana)	1	8.33
		“Pil sapi”	4	33.30
		Datura (Kecubung)	1	8.33
		Methamphetamine	2	16.67
		Gorilla tobacco (synthetic cannabinoid)	1	8.33
	Psychotropics	Diazepam	1	8.33
		“Pil koplo”	1	8.33
		Synthetic cannabinoid (“Sinte”)	1	8.33
		Alprazolam	7	63.63
		Benzodiazepine (unspecified)	1	9.09
		Clonazepam	1	9.09
		Clobazam	1	9.09
		Clozapine	1	9.09
	Other substances	Alcohol	10	83.33
		Vodka	1	8.33
		Wine	1	8.33

## DISCUSSION

This study aimed to examine the medico-legal and public health implications of substance use-related violence among children and adolescents in a psychiatric service setting. Youth violence in this context should not be viewed as an isolated criminal act, but rather as a reflection of developmental vulnerability, psychosocial adversity, and structural limitations within health and justice systems. This perspective aligns with international evidence that highlights decreased culpability in juveniles and the importance of rehabilitative justice.

From a neurodevelopmental perspective, adolescence is a key period marked by immature executive control, increased reward sensitivity, and greater vulnerability to peer influence. The use of psychoactive substances during this time further hampers impulse control and emotional regulation, raising the risk of aggressive and violent behaviors. Long-term and neurobiological research consistently shows that substance use worsens existing behavioral issues, offering a scientific basis for differentiating juvenile offenders from adults in the criminal justice system and supporting the idea that substance-related violence among minors stems from impaired decision-making rather than fully developed criminal intent.<sup>15,17,18,19</sup>

Beyond neurobiological mechanisms, psychosocial and environmental factors significantly influence substance-related violence among youth. Family dysfunction, exposure to violence, and involvement with antisocial peer groups interact synergistically with substance use, creating cumulative rather than isolated effects on aggressive behavior. Meta-analytic and cohort studies support this ecological model, which contrasts with punitive legal paradigms that focus narrowly on individual responsibility while overlooking structural determinants of violence.<sup>2,5,20</sup>

Gender differences in substance-related violent behavior have been widely documented, with males disproportionately acting as perpetrators. This pattern is often linked to sociocultural norms that promote aggression and suppress emotional expression among boys, especially in patriarchal societies. In these environments, substance use can serve as both a harmful coping mechanism and a trigger for outwardly expressed violence. Compared to high-income countries, where early mental health care and diversion programs are more readily available, low- and middle-income settings encounter greater obstacles in preventing the criminalization of psychologically vulnerable individuals' youth.<sup>4,21,23,24</sup>

The intersection of mental health services and the juvenile justice system is therefore vital in cases involving child offenders of violence related to substance use. International child protection and restorative justice frameworks highlight that such children should be managed through therapeutic and rehabilitative methods rather than punitive penalties. Psychiatric assessment plays a key medico-legal role in evaluating criminal responsibility, determining eligibility for diversion, and guiding individualized treatment planning.<sup>25</sup>

From a systemic perspective, the quality of psychiatric documentation is a vital medico-legal issue. Medical records serve not only as clinical tools but also as legal documents crucial for forensic assessments, judicial decisions, and policy making. Past studies in Indonesia have identified incomplete documentation as a common obstacle to effective coordination between health and legal sectors. Improving documentation practices is therefore vital to ensure due

process, defend the rights of child offenders, and support evidence-based juvenile justice reforms.<sup>11,26,27</sup>

From a public health perspective, multi-level prevention strategies remain essential for addressing youth violence related to substances. Evidence supports the effectiveness of early intervention, school-based mental health programs, family-centered prevention, and coordinated efforts between mental health and justice systems in reducing recidivism and preventing the escalation of violence adulthood.<sup>6,16,28</sup> These strategies align with both public health goals and the rehabilitative mission of juvenile justice systems. In conclusion, substance-related violence among children and teenagers is a complex medico-legal and public health problem caused by the interaction of neurodevelopmental vulnerabilities, psychosocial hardships, and systemic limitations. Effective responses require integrated mental health services, legally informed clinical evaluations, and prevention-focused justice policies that prioritize rehabilitation over incarceration punishment.<sup>29,30,31</sup>

## **CONCLUSION**

This study identified 33 cases of child perpetrators of violence with substance abuse at RSJ Grhasia from 2018 to 2022; however, only 17 cases could be analyzed due to incomplete medical records. The number of cases peaked in 2018–2019, sharply declined during the COVID-19 pandemic in 2020, rose again in 2021, and declined once more in 2022. Most perpetrators were male adolescents aged 11–18 years, aligning with national data showing that adolescent males are the most vulnerable group involved in violent behavior.

These findings show that child perpetrators of violence with substance use disorders form a high-risk group needing comprehensive and targeted interventions. Ongoing gaps in medical record documentation remain a key obstacle to epidemiological analysis and evidence-based planning, emphasizing the urgent need to improve health information systems. Overall, this study adds to the limited research on substance-related violence among children in Indonesia and highlights the importance of coordinated, multidisciplinary strategies that combine clinical care, psychosocial support, community prevention, family involvement, and health system improvements to enhance prevention and management efforts.

## **Declarations**

### **Authors' contribution**

NADM conceived and designed the study, coordinated data collection, and drafted the initial manuscript. ASM contributed to data acquisition, verification, and statistical analysis. NADM and ASM interpreted the findings and critically revised the manuscript for important intellectual content. All authors read and approved the final version of the manuscript and agree to be responsible for all aspects of the work.

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### **Conflict of interest**

There is no conflict of interest in this research.

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