

# INPLASY

## The interplay between juvenile delinquency and ADHD: a systematic review of social, psychological and educational aspects

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### ADMINISTRATIVE INFORMATION

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**Review Stage at time of this submission** - Completed but not published.

**Conflicts of interest** - None declared.

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**Amendments** - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 1 July 2025 and was last updated on 1 July 2025.

## INTRODUCTION

**Review question / Objective** Juvenile offenders are a very complex population, and it becomes important to have a global vision of the adolescent, including family and individual risk factors. This systematic review aims to shed light on the interplay between juvenile delinquency and ADHD through exploring behavioural, social, and psychological aspects. The review considers some traits associated with the disorder, such as emotional dysregulation and impulsivity, but neglects the early onset of criminal behaviour as a fundamental aspect. Furthermore, we make an attempt to analyse the additional factors such as conduct disorder, substance abuse and depression that accompany the disorder and increase the propensity to delinquency. Several family or sociodemographic variables, including education, employment status, and parental support, are also believed to be of great importance in modifying the relationship between ADHD and delinquency. Also, the treatment needs of the patients are highly dependent on the

mechanisms hypothesised to mediate the relationship between ADHD and criminality, thus calling for individualised and holistic treatment approaches.

**Rationale** ADHD is one of the most common neurodevelopmental conditions in young people, and it often shows up in youth who come into contact with the justice system. Traits like impulsiveness, difficulty focusing, and trouble managing emotions can make it harder for these adolescents to stay on a positive path. While past research has clearly shown a link between ADHD and delinquent behaviour, we still do not fully understand why this connection exists or how it plays out in real life.

Many young people with ADHD are also dealing with other challenges, such as conduct disorder, substance use, depression, or tough family situations. These additional issues might make it even more likely that they will end up in trouble. On top of that, factors like doing poorly in school, growing up in poverty, or getting involved in crime

at an early age can all add layers to an already complicated picture.

Overall, the rationale is to move beyond the acknowledgement of ADHD as a risk factor for delinquency and to clarify the complexity of its interplay with psychological, familial, and social influences, ultimately to support better prevention and rehabilitation strategies.

**Condition being studied** ADHD is described as a neurodevelopmental disorder that typically begins in childhood and often continues into adolescence and adulthood. It is characterised by a persistent pattern of inattention and/or hyperactivity-impulsivity that interferes with functioning or development. The core symptoms include: Inattention (difficulty sustaining attention, disorganisation, forgetfulness); Hyperactivity (excessive movement, fidgeting, inability to stay still); Impulsivity (interrupting others, difficulty waiting turns, acting without thinking)

The manuscript emphasises that ADHD often coexists with other mental health conditions, including conduct disorder, oppositional defiant disorder (ODD), substance use disorders, mood and anxiety disorders.

It also notes that ADHD has been increasingly identified in juvenile offenders, and that its symptoms, especially impulsivity and emotional dysregulation, may contribute to increased risk for delinquent behaviours. The condition affects not only behaviour but also academic performance, social interactions, and family relationships, all of which can play a role in the development of delinquency.

Furthermore, the study explores how ADHD intersects with socioeconomic status, family structure, educational challenges, and early criminal behavior, aiming to better understand the full picture of how ADHD contributes to juvenile offending./

## METHODS

**Search strategy** EBSCO Discovery Service Search Engine, Science Direct and PubMed were used for systematic search. The following keywords were used: “juvenile delinquency” or “juvenile offenders” or “youth offenders” or “juvenile justice” or “juvenile corrections” AND “ADHD” or “attention deficit hyperactivity disorder” or “attention deficit-hyperactivity disorder”. Beside the search engine, snowball search was applied, checking the reference list of papers found by the search engine. Also, the top 30 journals indexed in Web of Science (having the highest percentile above 50%) were screened (see Annex Table 1).

The searches were performed in August 2024. Unscreened articles were listed in Zotero (V6.0.22, Roy Rosenzweig Center for History and New Media, George Mason University, Washington DC).

**Participant or population** Age Range: The primary focus is on youth and adolescents, generally between the ages of 6 and 18, as they appear in juvenile justice systems or are identified in school and clinical settings.

Diagnosis: All participants in the reviewed studies have a formal diagnosis of Attention-Deficit/Hyperactivity Disorder (ADHD).

Context: These individuals are juvenile offenders, meaning they have engaged in criminal or delinquent behaviours such as theft, aggression, vandalism, or substance-related offences. Many are in contact with the juvenile justice system or placed in residential care facilities, detention centres, or diversion programs.

Comorbidities: A large portion of this population also presents with comorbid mental health conditions, such as: conduct disorder, oppositional defiant disorder (ODD), substance use disorder, mood disorders (e.g., depression)

Demographics: The participants come from a variety of socioeconomic backgrounds, but the reviewed studies often note a higher incidence of ADHD and delinquency among youth from low-income or single-parent households, or those exposed to adverse childhood experiences (e.g., trauma, neglect, or abuse).

Geographic Scope: The systematic review includes studies from multiple countries, providing cross-cultural insights into how ADHD and delinquency interact in different justice and healthcare systems. Overall, the population represents a high-risk group of young individuals whose combination of ADHD symptoms and environmental factors contributes to their involvement in delinquent behaviour. The study seeks to understand how these multiple dimensions affect their development and what interventions might help redirect their life course.

**Intervention** The review does not deal with interventions.

**Comparator** None reported.

**Study designs to be included** Study design: interview, survey, cohort study, randomised controlled trial.

**Eligibility criteria** The following inclusion criteria were set, following the PICOS format (P: Population, I: Interventions, C: Comparisons, O: Outcomes, S: Study designs):

- population: juvenile offenders/criminals
- intervention: original empirical research published in a peer-reviewed journal;
- comparison: examined juvenile offenders diagnosed with ADHD to those without ADHD diagnosis or with comorbid issues in various contexts (sociodemographic background, nation, psychological characteristics or non-offenders as a control group);
- outcomes: Behavioural outcomes and criminal offending and academic achievement
- study design: interview, survey, cohort study, randomised controlled trial.

Papers should have been written in English and in the disciplines of psychology, social sciences, humanities, and educational sciences. Review papers, commentaries, letters to the editor, conference papers, books, book chapters, dissertations, or newspaper articles were excluded.

**Information sources** We used EBSCO (Elton B. Stephens Company) Discovery Service Search Engine, which includes 85 databases. Beside the search engine, snowball search was applied, checking the reference list of papers found by the search engine. Also, the top 30 journals indexed in Web of Science (having the highest percentile above 50%) were screened.

**Main outcome(s)** The paper focuses on the following outcomes: sociodemographic factors, type of crime, age of onset, psychological consequences, comorbid disorders, academic achievement, methodology, and suggestions. The observations suggest that early identification and intervention are of paramount importance for young people with ADHD. Early diagnosis and appropriate treatment are essential to prevent delinquency. For young people with ADHD, there is a need for programmes that focus on addressing behavioural problems, developing social skills, and addressing mental health. Appropriate treatment and support programs that target mental health, academic achievement, and social skills can help prevent later quality of life deterioration, unemployment, and delinquent behaviour. Strengthening the family environment and increasing support at school is also key to improving the situation. Psychological support (e.g. cognitive behavioural therapy, impulse control training, social skills development) and psychiatric treatments (e.g. medication for attention deficit disorder and co-morbidities) can be effective in reducing the risk of crime.

**Quality assessment / Risk of bias analysis** The quality of the studies was evaluated by the Joanna

Briggs Institute (JBI) critical appraisal tool [20]. This tool assesses various aspects of study design, conduct, and reporting to gauge the reliability and validity of findings. It considers factors such as randomisation, blinding, sample selection, and data analysis methods. By identifying potential sources of bias, researchers can better interpret study outcomes and make informed decisions about the applicability of evidence in healthcare practice. This measure aids in promoting transparency, rigor, and credibility in research, thereby enhancing the quality of evidence-based healthcare interventions and guidelines. Papers were evaluated according to the appropriate tool on a 4-point scale (yes/no/unclear/not applicable).

**Strategy of data synthesis** The quality of the studies was evaluated by the Joanna Briggs Institute (JBI) critical appraisal tool [20]. This tool assesses various aspects of study design, conduct, and reporting to gauge the reliability and validity of findings. It considers factors such as randomization, blinding, sample selection, and data analysis methods. By identifying potential sources of bias, researchers can better interpret Kovács et al. INPLASY protocol 2024110015. doi:10.37766/inplasy2024.11.0015 Kovács et al. INPLASY protocol 2024110015. doi:10.37766/inplasy2024.11.0015 Downloaded from https://inplasy.com/inplasy-2024-11-0015/ INPLASY 2study outcomes and make informed decisions about the applicability of evidence in healthcare practice. This measure aids in promoting transparency, rigor, and credibility in research, thereby enhancing the quality of evidence-based healthcare interventions and guidelines. Papers were evaluated according to the appropriate tool on a 4-point scale (yes/no/unclear/not applicable).

**Subgroup analysis** None reported.

**Sensitivity analysis** None reported.

**Language restriction** English.

**Country(ies) involved** Hungary.

**Keywords** “juvenile delinquency” or “juvenile offenders” or “youth offenders” or “juvenile justice” or “juvenile corrections” AND “ADHD” or “attention deficit hyperactivity.

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