

## Chapter 6

# Understanding the Neuropsychology of Disruptive and Externalizing Disorders in Children

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### ABSTRACT

*Children tend to express their thoughts and emotions primarily through their behavior. At times, children's behavior may be problematic, characterized by disruptions, restlessness, and impulsive actions which may lead to behavioural problems. While it is normal for children to exhibit some degree of problem behavior, the intensity and severity can have significant impact on their overall development. Children with "high risk" for externalizing disorders like conduct problems, oppositional behavior, or attention-deficit/hyperactivity disorder (ADHD), exhibit unique brain activity patterns. This book chapter would thus aim to explore the distinct neuropsychological correlates of externalizing disorders and identify commonalities and differences. The chapter will also elaborate on various therapeutic interventions and strategies that can be applicable in managing this condition. Gaining an understanding of neuropsychological mechanisms that contribute to externalizing disorders can lead to more effective and targeted interventions to support children's development and well-being.*

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## INTRODUCTION

Children go through multiple stages of development from early childhood to late childhood and eventually to the adolescent stage. These stages encompass various aspects, including physical growth and development, as well as social, emotional, cognitive, and moral development. Understanding the extent of a child's development is often reliant on observing their behavior. Behaviors not only serve as indicators of a child's developmental stage but also provide insight into their emotions, self-perception, and thoughts concerning themselves and others. But are all behaviors desirable and adaptive? To establish a clear understanding, a distinction between adaptive and maladaptive behavior must be made. The American Association on Intellectual and Developmental Disabilities (AAIDD) provides a definition of adaptive behavior that consists of two essential components (Heber, 1961):

1. The extent to which an individual can function and sustain their independence.
2. The extent to which they meet the expectations of personal and social responsibility imposed by their culture.

These components should be observed in different domains of a child's life, including but not limited to sensorimotor abilities, self-care skills, interpersonal skills, academic and cognitive abilities, and vocational skills (Grossman, 1983).

However, at times, children's behavior may be maladaptive which refers to patterns of behavior that impede or disrupt an individual's functioning and their capacity to meet environmental demands. These behaviors are often ineffective or inappropriate responses to different situations, resulting in unfavorable consequences and challenges in everyday life. Some children may display overt expressions of maladaptive behaviors, such as disruptions, restlessness, and impulsive actions, which can adversely affect various aspects of their lives. Furthermore, these behaviors can hinder their ability to develop and maintain healthy relationships with others.

Behavioral problems are a common concern for children and adolescents, and seeking professional help is often necessary to address these issues. While it is normal for children to exhibit some degree of disorderly behavior, the intensity and severity of these behaviors can have significant impact on their overall development and functioning. While there are many behaviours that may have features of disruption, the umbrella term of externalizing disorders sums up most of the disorders which share the following features: poor impulse control including rule breaking, aggression, impulsivity, and inattention (Samek & Hicks, 2014).

Externalizing disorders involve behaviors that are outwardly expressed and primarily directed towards the environment. Thus, the term "externalizing disorders" encompasses a range of symptoms in which a child's observable behavior is reflective of negative actions and interactions with the external world. These disorder remains one of the most commonly observed conditions in children, with a prevalence rate of 7 – 10% that has remained consistent over time (Burt et al., 2001; Kessler, 2005; Merikangas & McClair, 2012). Additionally, in terms of gender, externalizing disorders are more prevalent in males than in females (Sharma et al., 2020). In this book chapter, the discussion revolves around three externalizing disorders: Conduct Disorder (CD), Oppositional Defiant Disorder (ODD), and Attention-Deficit/Hyperactivity Disorder (ADHD).

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