The Relationship between Executive Functions and Externalizing Behavior Problems in Early Childhood Education

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Abstract

In recent years the concern for antisocial behavior development during early childhood has increased as it has found to be linked to criminal and violent behavior in later stages of childhood. For this reason, the aim of this research is to understand the relationship between executive functions and externalizing behavior problems in early Childhood Education. The study involved 119 students (60 boys and 59 girls) from 5 years of age, enrolled in the last year of Kindergarten, in two private but publicly funded schools in Granada. The results indicate that low scores on executive functions are associated with high scores on externalizing problems.

Keywords: Externalizing problems; executive functions; inhibitory control; behavior problems; early childhood education.

1. Introduction

We live in an increasingly complex society, in which migratory phenomena and technological advances have increased the coexistence of socially heterogeneous groups. This diversity promotes the appearance of tensions, aggression, conflicts and socially inadequate behavior, which generates aggression, assaults, theft and other acts that involve the infraction of socially established norms. These types of behaviors are examples of what we know as

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‘antisocial behavior’, defined as the inability to respect (or difficulty in respecting) the rights of other people (Gaik, Chong, Elias, & Uli, 2010); that is to say, all of those behaviors that imply an infraction of social norms, the destruction of property and the humiliation of others or transgression of their basic human rights (Clakins & Keane, 2009; Farrington, 2008; Murray & Farrington, 2010).

In recent years we have become increasingly concerned about the development of antisocial behavior during early infancy, given that it has been linked with criminal and violent behavior at later stages (Losel & Bender, 2012; Tolan, Dodge, & Rutter, 2013). In this line, many longitudinal studies have found indicators, visible in infancy, which enable prediction of the development of aggressive behavior during adulthood (Casp, 2000; Farrington, 2008; Loeber, Green, & Lahey, 2003; Welsh & Farrington, 2006).

The nature of this type of behavior has been extensively investigated, and it has been concluded that antisocial behavior can be considered to originate from multiple causes. From a socio-cognitive perspective, a series of risk-factors that could stimulate the emergence and continuance of these behaviors have been identified, which are based on four principle factors (Farrington, 2008): (a) personal factors (such as oppositional defiant disorder, poor self-regulation, poor social skills, lack of emotional competency, amongst others); (b) contextual (for example, poverty), familial (such as poor parental supervision or negative parenting styles) or educational factors.

On the other hand, behavioral disorders have two broad dimensions: internalizing and externalizing disorders. Internalizing disorders consist of all those behaviors directed towards the interior which result in behavioral anomalies, such as isolation, somatization disorder and depression. In contrast, the externalizing disorders consist of all those behaviors that result in discomfort to others, verbal and physical aggression and acts of violence (Gaik et al., 2010).

Due to the consequences it entails, antisocial behavior is an increasingly worrying topic for society. For this reason, in recent years there has been a growing interest in early-years intervention strategies to prevent external behavior problems (Farrington & Welsh, 2007). In infancy, externalizing behavior refers to a set of aggressive and disturbing behaviors, like ‘paddies’ or hitting/hurting others (Duncan & Magnuson, 2011; Zachrisson, Dearing, Lekhal, & Toppelberg, 2013). These behaviors are near-universal in infancy, between the ages of 2 and 4 years old, and later optimally decline (Shaw, Lacourse, & Nagin, 2005; Tremblay, 2010).

Small children who demonstrate high levels of externalizing behaviors are also at risk of suffering from academic difficulties later, including rejection by their peers, low academic achievement, higher risk of educational disengagement and decreased motivation (Duncan & Magnuson, 2011; Riccio, Hewitt, & Blake, 2011; Schindler et al., 2015). Individuals who suffer from these types of problems have been characterized as a heterogeneous group, with multiple processes in their development which instigate and maintain these behavioral problems (Ellis, Weiss, & Lochman, 2009).

For these reasons, behavioral problems generate a lot of worry in the current climate and it is important that they are studied with the aim of implementing interventions that will help reduce their occurrence (Ellis et al., 2009).

1.1. Externalizing behaviors and executive functions

The majority of authors agree that executive functions encompass a set of cognitive processes that allow us to establish goals, make plans, exercise control over our thoughts, emotions and actions and precisely select appropriate behaviors to inhibit undesirable conduct (Delgado-Mejía & Etchepareborda, 2013; Schoemaker, Mulder, Dekovic, & Matthy, 2013).

The structure of executive functions has been a much debated topic in recent years. However, diverse authors (for example, Diamond, 2013; Garon, Bryson, & Smith, 2008) contend that executive functions in children of pre-school age are divided into three basic components: inhibitory control, working memory and cognitive flexibility.

In this way, one of the processes essential to executive functions is inhibitory control, defined as the capacity to deliberately inhibit or overcome a dominant response (Diamond, 2013). Inhibitory control is important because it allows people to contract inappropriate behaviors in various contexts, and to make adequate responses to satisfy complex demands and to live in a manner adapted to changing environments, making it essential in the prevention of behavioral problems (Goldstein et al., 2007).

Several studies have demonstrated inhibition deficiencies in children with externalizing disorders, especially when motivational processes, that is to say, reward and punishment, are involved (Schutter, van Bokhoven, Vanderschuren, Lochman, & Matthy, 2011).
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