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Aggressive behavior in a sample of children with autism spectrum disorders

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ABSTRACT

Little is known about the manifestation of aggressive behavior in children with autism, although it is commonly cited as a significant problem. Existing reports in autism do not emphasize subtypes of aggression, whereas distinguishing forms of aggression is commonplace in the typically developing literature. This study compared a sample of 121 children aged 3–20 years with autism spectrum disorders (ASD) to 244 children with other intellectual and developmental disabilities (IDD; age 4–21 years). Item- and subscale-level data from the Children's Scale for Hostility and Aggression: Reactive/Proactive (C-SHARP) were reported. Children with ASDs received higher ratings than those with IDD on several subscales tapping physical and reactive aggression. Within the ASD group, children with Asperger's disorder were rated significantly higher than children with autism on subscales tapping covert and verbal behaviors. Results indicate that at least some types of aggression were more common in children with ASDs than those with IDDs.

Aggression has not been well characterized in children with autism spectrum disorders (ASD) (Aman & Farmer, in press; Lecavalier, 2006). It is clear from the intellectual disability (ID) literature that aggressive behavior often has a major impact in individuals' lives. Aggressive behavior is a leading cause of residential placement, interferes with classroom learning, and results in reduced opportunities for independent functioning and interpersonal relationships (Benson & Aman, 1999). There is evidence that the consequences of aggressive behavior are similar for patients with ASD to those with ID (Matson, Wilkins, & Macken, 2009).

Despite the importance of aggressive behavior, little research has been done to determine: (a) what normative levels of aggressive behavior are in children with ASD, (b) if those normative levels are different from typically developing peers or from peers with intellectual or other developmental disabilities (IDD), (c) if the aggression displayed by children with ASD falls into the same subtypes displayed by typically developing children, and (d) what the normative patterns of development of aggression are in children with ASD. This study offers some data towards developing our understanding of the first question.

1. Barriers to aggression research in ASD

The limitations listed above in existing research likely stem, in part, from the low prevalence of ASD relative to other disorders such as ADHD, which makes population-based studies very difficult to perform (Aman & Farmer, in press).

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A second impediment is the lack of terminological consensus among researchers, which is common to the study of aggression in all fields. This reflects several facts about aggression: it is an emotionally charged term, and it involves social and moral judgment (Gendreau & Archer, 2005). Some are reluctant to label a child as "aggressive," because aggressive children sometimes turn into aggressive adults (Reiss & Roth, 1993), and aggressive adults are the target of societal scorn. Although aggression is a common (and often adaptive) behavior in children (Connor, 2002), the pressure to avoid the term aggression has led to interchangeable expressions that have similar, though not identical, meanings (e.g., explosive, disruptive, maladaptive, etc.). In addition to reflecting a reluctance to use the word aggression, the myriad terms applied also reflect an extremely heterogeneous repertoire of behaviors.

The psychology literature often defines aggression as something along the lines of "intentional harm doing" (Hartup, 2005) or "behavior that is aimed at harming or injuring another person or persons," (Parke & Slaby, 1983, p. 50) which encompasses physical, emotional, and social harm. Central to these definitions is the *attribution of intent*, which most researchers agree is a necessary condition for aggression, although there is little consensus regarding how to measure it (e.g., Dodge, Coie, & Lynam, 2006). The issue of intent becomes especially relevant when discussing individuals who may have limited cognitive ability or an impaired ability to empathize with another, as in the case of children with autism. As Tremblay (2000) pointed out, some might argue that some provoked behaviors might be considered an impulsive *unintended* reaction. It may also be true that some children with autism may engage in aggressive behaviors without malice or true understanding of what they are inflicting on another. However, the fact remains that these behaviors must be studied and understood in order to attempt to minimize them.

One way in which we may be able to distinguish between "intentional" and other aggressive acts is to pay special attention to *subtypes* of aggressive behaviors. Currently, there are no nosological classifications of childhood aggression (other than the aggressive behaviors subsumed under the diagnoses of childhood-onset and adolescence-onset CD and ODD in the DSM-IV), although many subtypes have been studied in children. Although there are several empirically supported subtypes (Connor, 2002), including physical/verbal, proactive/reactive, and overt/covert, only the first two will be discussed here. The first distinction is obvious to any observer, and it is evidenced consistently in cross-cultural developmental studies (Hinshaw & Lee, 2003). Physical aggression is perhaps the most salient of all the subtypes; probably because it is the most socially costly of aggressive behaviors (Broidy et al., 2003), and adolescent/adulthood physical aggression can often be traced back to behavior identified in early childhood (Hinshaw & Lee, 2003; Keenan & Wakschlag, 2000). Reactive aggression is characterized by behavior that results from external provocation without thought to personal gain, while proactive aggression is a learned phenomenon maintained by the positive outcomes (Dodge & Coie, 1987). Reactive aggression is associated with hostile attributions and impaired peer relations (Schwartz et al., 1998), while proactive aggression is associated with social dominance and later delinquency and disruptive behaviors (Vitaro, Gendreau, Tremblay, & Oligny, 1998). It is clear from data in the typically developing literature that it is necessary to explore *subtypes* of aggressive behavior rather than just the omnibus "aggression."

2. Prevalence data in ASD

The few studies of the prevalence of aggressive behavior in ASDs suggest that aggressive behavior is at least as common in children with ASD as in their peers with other IDDs, if not more so. In a study frequently cited as providing one of the first prevalence estimates of problem behavior in a sample with autism, Ando and Yoshimura (1979) presented data on 47 children with autism aged 6–14 years, compared with an ID group ($n = 128$). The teacher-endorsement rates for the autism group on the "aggression" items of the Maladaptive Behavior Scale were (a) *Attacks against other individuals* (43%), (b) *Destruction of property* (34%), and (c) *Tantrums* (47%). Endorsement rates for the ID group were much lower (5%, 4%, and 3%, respectively; all differences statistically significant).

Unlike Ando and Yoshimura (1979), few studies report data at the item-level. One exception is probably the most detailed effort to date to describe and classify problem behaviors in children with ASD. Lecavalier (2006) reported item-level data on 353 parent and 437 teacher Nisonger Child Behavior Rating Form (NCBRF) ratings (303 children were rated by both informants). The average proportion of children rated as moderate or severe for the *Conduct Problem* items was 18.9% for parents and 17.5% for teachers. Item-level data were presented for the entire scale, but a few items are of particular importance. The proportion of children rated as "moderate" or "severe" by parents and teachers was 5.3% (both parent and teacher) on "Physical fights" and 9.9% (parent) and 14.8% (teacher) on "Attacks people."

In this report, we present data on the characteristics of aggression at both an item-level (i.e., specific behaviors) and an empirically derived subscale level (i.e., subtypes of aggression). An instrument developed specifically for measuring aggression, the *Children's Scale for Hostility and Aggression: Reactive/Proactive* (C-SHARP; Farmer & Aman, 2009, 2010) was used to obtain a broader and more detailed assessment of aggressive behaviors. Additionally, we explored possible moderator variables (ASD subtype, age, and gender) to determine if there was any evidence for difference.

3. Methods

This study was approved by the Behavioral and Social Sciences Institutional Review Board of our university.