Meeting the Physical Education Needs of Children With Autism Spectrum Disorder

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满足自闭症谱系障碍儿童体育需求

National Association for
Sport and Physical Education
an association of the American Alliance for Health, Physical Education, Recreation and Dance

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Preface

The purpose of this book is to provide physical education professionals with information and resources to help them accommodate the instructional and programmatic needs of students with autism spectrum disorder (ASD) both in self-contained and inclusive class settings.

ASD encompasses a range of developmental disabilities that affect a person's verbal and nonverbal communication, understanding of language and socialization with peers. Other characteristics of ASD can include engagement in repetitive activities, resistance to environmental change and unusual responses to sensory experiences. The range of severity can run from extremely mild to severe. ASD, however, is a neurodevelopmental disorder, not an illness, disease or behavioral disorder. ASD is a lifelong condition with which some children are born, even though it's typically not diagnosed until age 3 or older. It has no known cure, although one can find documented cases of symptoms being reduced and even of some children being re-diagnosed altogether.

As a physical educator, you are likely to encounter students with ASD in inclusive class settings and, possibly, in self-contained classes. Meeting the physical education needs of children with ASD can be very challenging, and the information in this book is intended to help you meet that challenge.

The book contains eight chapters. Chapter 1 introduces readers to ASD and describes the characteristics of those with the disorder. The chapter also describes — and dispels — myths commonly associated with ASD. Chapter 2 describes instructional strategies intended to enhance the abilities of students with ASD to cope with two issues that they typically face: communicating with others and managing sensory perception problems.

Chapter 3 outlines strategies to teach motor development and sport-related skills to children with ASD. It also discusses other instructional techniques to enhance the ability of students with ASD to reach the learning goals set for all students in physical education classes. Chapter 4 describes how to provide instruction, in the context of physical education class, to help students with ASD develop the social skills necessary to succeed in life.

Chapter 5 describes curricular approaches used commonly in physical education programs and how those approaches can best meet the developmental needs of students with ASD. The chapter also provides teaching considerations to address some of the challenges that may be associated with these models. Chapter 6 provides strategies to apply

within self-contained or inclusive classes to promote an environment that is conducive to learning for all students.

Chapter 7 presents strategies to encourage appropriate behavior and to address those behaviors that interfere with learning. Chapter 8 describes ways in which physical education teachers can work effectively with others (e.g., classroom teachers, paraprofessionals, other students, parents) to help students with ASD learn and develop.

To make the best use of the information in the book, we recommend reading Chapter 1 first, even for those who are somewhat acquainted with the nature of ASD. The descriptions of the characteristics of children with ASD in the introductory chapter include commonly held myths about children with ASD that sometimes affect our ability to meet the needs of these children. Being well acquainted with the characteristics of people with ASD will help you to choose strategies from the remaining chapters that are best suited to your students.

Keep in mind that the strategies suggested in the remaining chapters depend on context. If you teach students with ASD in a self-contained class, some of the strategies might be more attractive to you than if you teach an inclusive class. In addition, your students' spectrum of abilities will influence the strategies that are appropriate in your setting. Although this book is focused on meeting the needs of students with ASD in physical education class settings, many of the activities and strategies described in the remaining chapters are effective with all students in inclusive class settings, in the classroom as well as in the gymnasium.

The strategies and sample activities in the book are intended to get you started. The best strategies and activities are the ones that *you* design to meet the needs of the students in *your* school.

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Characteristics of Students With ASD

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Introduction

Since 1943, when Leo Kanner, M.D., first described "autism," (Ozonoff, Dawson & McPartland, 2002), our understanding of the disorder now known as autism spectrum disorder (ASD) has taken tremendous leaps. Yet, despite a growing body of research on the disorder and the increasing incidence of which it has been diagnosed over the past 20 years, we still don't know what causes ASD, nor have we discovered a cure. What we do know is that teachers — including physical education teachers — face a huge challenge in providing a high-quality education for children with ASD. And the first step in meeting a challenge is to develop an understanding of what one is up against.

The purpose of this chapter is simply to explain the characteristics of ASD. Specifically, this chapter will discuss what ASD is, its prevalence in the United States and the characteristics that are often associated with it. Lastly, the chapter will help clarify some misconceptions about the disorder.

Published by the American Psychiatric Association (APA), *The Diagnostic and Statistical Manual of Mental Disorders* (DSM) is used in psychological clinical settings and research settings to identify and describe specific neuropsychological disorders, including ASD. The current version of the DSM — DSM-IV-TR (APA, 2000) — uses the term "pervasive developmental disorders," which includes autistic disorder (also called "classic" autism), Asperger's disorder (commonly referred to as Asperger's syndrome), Rett's disorder, childhood disintegrative disorder, and pervasive developmental disorder – not otherwise specified (PDD-NOS) (otherwise known as "atypical" autism). This book focuses on disorders commonly termed as "autism spectrum disorders," which include autism, Asperger's syndrome and PDD-NOS. Rett's disorder and childhood disintegrative disorder are outside the scope of this book.

An updated version of DSM — DSM-V, due in 2013 — proposes a significant reorganization of those labels. Under DSM-V, all children who previously had been labeled as having autistic disorder, Asperger's syndrome, childhood disintegrative disorder or PDD-NOS would be placed in one large category, termed "autism spectrum disorder." Therefore, while children who are diagnosed before 2013 still will have the disability label "Asperger's syndrome" or "PDD-NOS," those who are diagnosed after 2013 most likely will have the disability label "autism spectrum disorder." For the purpose of this book, we will use the term "autism spectrum disorder" (ASD) to reference all children on the spectrum (including those labeled before 2013 as having autistic disorder, Asperger's syndrome or PDD-NOS). Regardless of the terminology, the strategies and suggestions provided in this book are designed to assist all students on the spectrum.

Definitions

Autistic Disorder (Autism), Asperger's Syndrome & PDD-NOS

Even though the DSM-V proposes not to recognize autism, Asperger's and PDD-NOS as separate disorders, it's likely that schools and community agencies will continue for some time to use the current definitions. So, it's important to understand the differences among the disorders.

While autism and Asperger's have some similarities, they also have unique differences. Figure 1.1 shows the similarities and differences between the two disabilities. Both disorders are characterized by a significant impairment in social interaction and a preoccupation with a specific pattern of behavior, area of interest or activity. To be labeled as having autism, a child also must show significant delays in communication skills, imaginative play and self-help skills. Children who are labeled as having Asperger's syndrome typically participate in imaginative play, show no delay in communication skills and demonstrate a normal cognitive level, leaving them with few challenges regarding self-help skills (APA, 2000).

The PDD-NOS label is given to children who demonstrate some characteristics associated with ASD, but who don't meet enough diagnostic criteria to warrant a diagnosis of autism or Asperger's (APA, 2000). Therefore, while children diagnosed with PDD-NOS might demonstrate some of the characteristics of autism and/or Asperger's — and they need appropriate services — they don't fit within the ASD or Asperger's syndrome categories. *Example:* Jose has significant social delays that interfere with his everyday activities but has no problem with verbal and nonverbal communication, has a normal cognitive level and doesn't show any stereotypical behaviors, interests or activities. After it's determined that no other medical issues are causing his social-skills deficiency, Jose could be diagnosed as having PDD-NOS. Still, the strategies used to work with children with PPD-NOS overlap with those implemented for children with ASD or Asperger's.

Autism Spectrum Disorder After 2013

As discussed earlier, DSM-V will combine current disorders under the label "autism spectrum disorder," but it will reorganize some of the diagnostic criteria. Figure 1.2 on p. 6 outlines the proposed criteria that medical professionals would use to diagnose a child with ASD.

Figure 1.1 Characteristics of Autism & Asperger's Syndrome

Both Autism & Asperger's Syndrome
Difficulties with social interaction (must display at least two):
• Does not use or has difficulty using and interpreting nonverbal communication (e.g., eye contact, facial expressions, body postures, hand gestures). • Lack of peer relationships that would be appropriate for age. • Lack of initiating or responding to others' interests, excitement or enjoyment. • Lack of social or emotional reciprocity.
Demonstrates restrictive repetition of behavior, interests and activities (must display at least one):
• An abnormal obsession with a particular topic, object or area of focus (e.g., cars, dinosaurs) that becomes restrictive to lifestyle. • Inflexible toward changing a specific, nonfunctional routine or ritual. • Persistent preoccupation with topics or objects (e.g., string, dinosaurs). • Stereotypical or repetitive motor behaviors, also called self-stimming/ self-soothing (e.g., rocking back and forth, spinning, flapping fingers).

Autism	Asperger's
Impairment in communication (must display at least one):	• No delay in language or communication skills.
• Delay or no use of spoken language.	• No delay in cognitive abilities or age-appropriate self-help skills (e.g., ability to dress oneself or make a snack).
• Typical speech development, but an inability to initiate or maintain a conversation.	• No delay in curiosity about the environment.
• Abnormal use of language (e.g., simply repeating certain phrases or what someone else says).	
• Lack of self-initiated make-believe play or age-appropriate imitative play.	

Adapted from DSM-IV Diagnostic Criteria for Pervasive Developmental Disorders *(APA, 2000).*

Figure 1.2 Proposed DSM-V Diagnostic Criteria for Autism Spectrum Disorder

A. Persistent deficits in social communication and social interaction across contexts, not accounted for by general developmental delays, and manifest[ed] by all three of the following:
   1. Deficits in social-emotional reciprocity; ranging from abnormal social approach and failure of normal back-and-forth conversation through reduced sharing of interests, emotions and affect, and response to total lack of initiation of social interaction.
   2. Deficits in nonverbal communicative behaviors used for social interaction; ranging from poorly integrated verbal and nonverbal communication, through abnormalities in eye contact and body language, or deficits in understanding and use of nonverbal communication, to total lack of facial expression or gestures.
   3. Deficits in developing and maintaining relationships, appropriate to developmental level (beyond those with caregivers); ranging from difficulties adjusting behavior to suit different social contexts through difficulties in sharing imaginative play and in making friends, to an apparent absence of interest in people.

B. Restricted, repetitive patterns of behavior, interests or activities, as manifested by at least two of the following:
   1. Stereotyped or repetitive speech, motor movements or use of objects (such as simple motor stereotypes, echolalia, repetitive use of objects or idiosyncratic phrases).
   2. Excessive adherence to routines, ritualized patterns of verbal or nonverbal behavior, or excessive resistance to change (such as motoric rituals, insistence on same route or food, repetitive questioning or extreme distress at small changes).
   3. Highly restricted, fixated interests that are abnormal in intensity or focus, such as strong attachment to or preoccupation with unusual objects, and excessively circumscribed or perseverative interests.
   4. Hyper- or hyposensitivity to sensory input or unusual interest in sensory aspects of environment, such as apparent indifference to pain/heat/cold, adverse response to specific sounds or textures, excessive smelling or touching of objects, and fascination with lights or spinning objects.

C. Symptoms must be present in early childhood, but might not fully manifest until social demands exceed limited capacities.

D. Symptoms together limit and impair everyday functioning.

Adapted from "A 09 Autism Spectrum Disorder," DSM-5 Development, American Psychiatric Association, www.dsm5.org/ProposedRevisions/Pages/proposedrevision.aspx?rid=94. Retrieved February 24, 2012.

Prevalence

Each year, about one in every 88 children is diagnosed with an autism spectrum disorder. Because of that high rate of incidence, it's estimated that 1.5 million Americans have been diagnosed with ASD. In addition, ASD is four to five times more likely to affect boys than girls. But there's no evidence to suggest that it occurs more often among different social classes, different races or different cultures. While the number of children diagnosed with ASD increases each year, experts have not been able to give a definitive explanation for the cause of the increase (CDC, 2012).

Characteristics

The following characteristics are associated with ASD. Some of the characteristics are related directly to the disorder's definition, while other characteristics are not currently within the definition of ASD but are seen commonly in people who have been labeled as on the ASD spectrum.

It's absolutely essential to recognize that children with ASD — just as children who *don't* have disabilities — are individuals. Therefore, each child has a unique presentation of the following characteristics. And not every child with ASD displays all of these characteristics. It's also important to remember that each of the following characteristics falls along a spectrum. Just because a child has been labeled with the disorder doesn't mean that he or she will present a characteristic in the same manner or to the same extreme as another child with an ASD diagnosis. One child might display extreme sensitivity to sound and have only moderate difficulties with communication, while another child might display mild sensitivity to sound but have extreme difficulties with communication. Each child is a unique case and should be approached as an individual, not a disability label!

Social Interaction

Evan is in a 4th-grade PE class. The teacher has broken the class into groups to complete stations on manipulative skills such as throwing and catching. Evan instantly moves to the corner of the gym and starts analyzing the floor. The aide tries to direct Evan to the group by engaging him with another student. Evan turns his body away from his peers and looks at the floor. When a student asks whether Evan wants the ball, he doesn't respond. The other student hands Evan the ball and Evan walks away from the station. When the aide redirects Evan again, he starts to scream and throws the ball into the middle of the room. He then runs over to a different station, where he finds another ball.

Camille walks into the gym eager to start her 9th-grade PE class. She runs up to some girls who are chatting about their weekend plans while they wait for the rest of the class to finish changing. Camille stands close to one of the girls and starts talking to her about her favorite TV show. The girls ignore Camille and move away from her. Camille follows the group, talking louder over some of the girls engaged in the conversation. One of the girls humors Camille and asks a question about the TV show, but then tries to talk about her weekend. Camille instantly jumps on the TV show conversation but doesn't stop talking so that the other girls can talk, and doesn't pick up on the change of subject. She then notices that the teacher has brought out the balls, and she runs away in the middle of her sentence without saying "Goodbye." The girls start laughing and make fun of Camille.

By definition, one of the most significant areas of difficulty for children with ASD is with the ability to engage in commonplace social interaction (APA, 2000). Children without ASD tend to pick up socially acceptable behaviors by observing people around them; they learn from their parents, teachers and peers starting at a very young age. Children *with* ASD, however, tend not to learn these behaviors simply through observation and interaction with other people during daily activities. As a result, they can demonstrate social skills that are not considered age-appropriate, and/or they demonstrate social skills in an odd manner.

While each child will struggle in different areas, some social skills seem to present a consistent problem for people with ASD. *Example:* Many children with ASD struggle to make eye contact when they talk. They might look at the floor or to the side of the room, or they might turn their bodies away from the person they're addressing. Other children with ASD struggle with starting or ending a conversation. They might walk up to a person and start talking without any form of greeting or transition. A few minutes later, they simply walk away, without saying "Goodbye" or any other form of concluding statement.

Children with ASD also tend to struggle with taking turns in a conversation (i.e., either dominating the conversation or not contributing at all), with contributing relevant information to a conversation (e.g., talking about food when the group is talking about sports) and with standing an appropriate distance from the people to whom they are talking (e.g., stands too close or many feet away). There is no one master list of all the social skills that present problems for children with ASD, because each child is unique. Nevertheless, Figure 1.3 contains a list of social skills that often present challenges for children with ASD.