

Clinical Focus

What Does It Mean to Be Social? Defining the Social Landscape for Children With Childhood Apraxia of Speech

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Purpose: What does it mean to be social? In addition, how is that different from behaving socially appropriately? The purpose of this clinical focus article is to tackle these two questions along with taking a deeper look into how communication challenges in childhood apraxia of speech impact social competencies for young children. Through the lens of early social development and social competency, this clinical focus article will explore how speech motor challenges can impact social development and what happens

when young learners miss early opportunities to grow socially. While not the primary focus, the clinical focus article will touch upon lingering issues for individuals diagnosed with childhood apraxia of speech as they enter the school-aged years.

Conclusion: Finally, it will address some foundational aspects of intervention and offer ideas and suggestions for structuring therapy to address both speech and social goals.

What does it mean to be social? In addition, how is that different from behaving socially appropriately? The purpose of this article is to tackle these questions along with a deeper look into how the communication challenges inherent in childhood apraxia of speech (CAS) impact social competencies for young children. To better understand the impact of a mismatch of lag between one's social abilities and the peer group, we first need to understand the usual or "normal" developmental trajectory. There is an extensive range of research supporting how young children socially attend to people and their environments while still in the crib. This early social attention or joint referencing and joint attention (Freeman et al., 2015; Gopnik et al., 2001; Mundy & Acra, 2006) are reported to be central to the foundation of social development. In addition, while social attention attunes the social learner to relevant information, it is the interpretation of this social information that engages one to socially respond. Understanding and explaining this input/output pattern of social information were and are the motivations for developing a visual model to represent the development of social competency. Using

the current and seminal literature from social information processing (Beauchamp & Anderson, 2010; Crick & Dodge, 1994; Dodge & Price, 1994), social learning theory (Bandura, 1977), joint attention (Mundy, 2016; Mundy & Acra, 2006), and social interpretation and social cognition (Frith & Frith, 2012, Tomasello, 1995), and social communication (Mundy, 1995, Saulner & Klin, 2007) as a backdrop, we formulated the Social Thinking–Social Competency Model (ST-SCM; Winner and Croke, 2009). This model serves as a visual representation of four key components of social development (social attention, social interpretation, social problem-solving, and social responses) that are well documented in the literature. Difficulties accessing or missing opportunities to experience one or more of these four areas are commonly found in individuals with an array of diagnoses, including CAS. We will attempt to refine an understanding of social competency and the multifaceted influences that are necessary and sufficient to "grow" our social brain. CAS is a speech motor disorder involving praxis deficits that result

Disclosures

Financial: Nancy Tarshis is a member of the Social Thinking Speakers and Training Collaborative and a co-author of some of their published materials. She provides training for social thinking in many different formats and receives royalties for her curriculum. Michelle Garcia Winner is the owner, CEO, and President of Think Social Publishing, Inc. She publishes information about aspects of the Social Thinking Methodology and provides training about it in many different formats. Pamela Croke is a full-time salaried employee of Think Social Publishing, Inc. She does not receive additional compensation for speaking or royalties for books or products. She is also employed by the Social Thinking Center, as a speech and language pathologist.

Nonfinancial: Nancy Tarshis has no relevant nonfinancial interests to disclose. Michelle Garcia Winner has no relevant nonfinancial interests to disclose. Pamela Croke has no relevant nonfinancial interests to disclose.

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Editor: Peter Meulenbroek

Received October 9, 2019

Revision received March 29, 2020

Accepted March 31, 2020

https://doi.org/10.1044/2020_PERSP-19-00116

in inconsistent vowels, difficulty planning the movement and timing of sound sequences, and issues with prosody (American Speech-Language-Hearing Association, 2007). While there are not specifically identified diagnostic markers, we do know that CAS carries a few consistencies separating it from other speech disorders. These include inconsistent errors, interruption of stress patterns, and articulatory groping (Grigos et al., 2015; Shriberg et al., 1997). Severity ranges from mild to severe and onset are from birth.

What Does It Mean to Be Social?

Typically developing children (and adults) are born to collaborative mindsets. They do not simply strive to meet their own goals but rather to collaborate effectively, helping others accomplish their goals, as well as making and meeting shared goals. This is how children exist within a family, play with others on the playground, and work effectively together with their peers and teachers in a classroom. This collaborative mindset helps when figuring out how to share space effectively when walking down a busy hall, driving cars, standing in line, or hanging out in whatever venue they choose. To be social or socially competent is to coexist effectively with others (friend or foe) in the social world.

Humans exist in a social world whenever they are with others, plan to be with others, are thinking about others, or interpreting memories of being with others. This also includes when they are trying to figure out what people are doing (or meaning) when they are not physically present (TV, movies, YouTube videos, literature, newspaper, text streams, Instagram, etc.). The social world has countless landscapes; each (social context) involves sharing space or interacting with others based on the situation, their roles within the situation, known and unknown relationships (friend, acquaintance, stranger), and the social norms (behavioral and language-based expectations). To be considered socially competent is to be able to navigate the shifting demands of known and novel social landscapes. This begins early, even children as young as 4 years of age can shift and adapt as the situation demands. By school age, the expectation is that children are capable of figuring out and executing the expectations of social situations across the home and school environment.

Defining social competence is complicated. People do not get to decide whether or not others view them as socially competent. Instead, social expertise is determined as a judgment call on the part of others in the shared social landscape. It is also a moving target. The target is defined by where you are, who you are with, and what is expected in that moment, place, at that time, all while taking age into account (Crooke et al., 2016).

The Developing Social Mind and Social Competency

Social development starts even before birth. From the earliest days, children are in a dance of social experience with their caregivers. Every interaction is washing over their brains and changing the way they process social

information. Every stimulus, sight and sound, and experience teaches the brain something. In addition, throughout life, this teaching creates daily changes in the architecture of our brains (Kandel, 2019).

Typically developing brains are wired to absorb and make sense of this array of social information. Every experience and interaction helps to shape the way we see the world and how we mature. Neurotypically developing brains are designed to gather relevant information by observation (i.e., thinking with eyes), listening, and experiencing the world through movement and other senses. The brain then uses this information to make meaning of the experiences via the lens of context. Over time, children refine their observational abilities and begin to interpret, on a more sophisticated level, the situation, how people are likely to think and feel about a situation, and each other. In other words, this intuitive built-in “social radar” (Winner, 2000, 2007) allows them to observe the context, people sharing space (e.g., lining up in a grocery store), as well as interpersonal interactions to intuit expectations across the many situations they encounter hour by hour and day by day. This journey to social competency is, in some ways, miraculous in that the neurotypical social brain does this with very little effort.

However, what happens when a child’s social learning brain encounters roadblocks on the path to accessing social information? What are the outcomes when a child misses critical input about how the social world works in these early years of development? For those with CAS, this implicit social learning is made endlessly more complicated by early and ongoing communicative challenges impacting social experience and social encounters. These early challenges impact every level of the social experience, reducing those important opportunities for circles of engagement that teach young social learners how the social world works and, in turn, their overall experience in learning to navigate and regulate to be able to work in the social world. A brief explanation of the model follows.

Social Competency and the Social Thinking Methodology

Understanding what is meant by social competence is a complicated task, and using that information to guide intervention is even more daunting. The Social Thinking Methodology (STM) is a metalinguistic and cognitive methodology that has, at its foundation, strong connections to evidence across therapeutic disciplines (Crooke & Winner, 2016). One part of this STM is a model of social competency that visually organizes core components of social development. ST-SCM (Winner & Crooke, 2009) both defines and describes aspects of social competencies that are below the surface or simple social responses (e.g., outward social behaviors) to look beyond the behaviors one can see. The motivation for developing the SCM was (and is) to highlight factors potentially getting in the way of social development that therapists may not routinely consider. It serves as a guide to prompt us to pause and think more deeply about what might be underlying or influencing the development

of social competencies. The model integrates many aspects of social understanding including work in social information processing (Beauchamp & Anderson, 2010; Crick & Dodge, 1994). As noted by Crick and Dodge, social understanding arises as a result of one's interactions with the world. One's ability to observe, interpret, problem-solve, and then respond rests on a platform of ongoing experiences, each of which adds information to our social understanding, which shifts and adapts across time.

Note: We would like to disclose potential bias as this model was developed by two of the contributing authors who are connected to the broader STM. While the SCM is only one small component of the broader methodology, exposure to this model may inadvertently benefit the authors.

The best way to think about this model is to imagine an iceberg. The swoop on the graphic represents a waterline. What we see above the waterline can be thought of as the social behaviors or social responses rather than "social skills." The area below the waterline represents the building blocks of one's social competencies (see Figure 1).

The SCM has four distinct parts, three of which fall below the waterline: *Social Attention*, *Social Interpretation*, and *Problem Solving*. Social competencies continually evolve across the lifetime; they are described as "developmental."

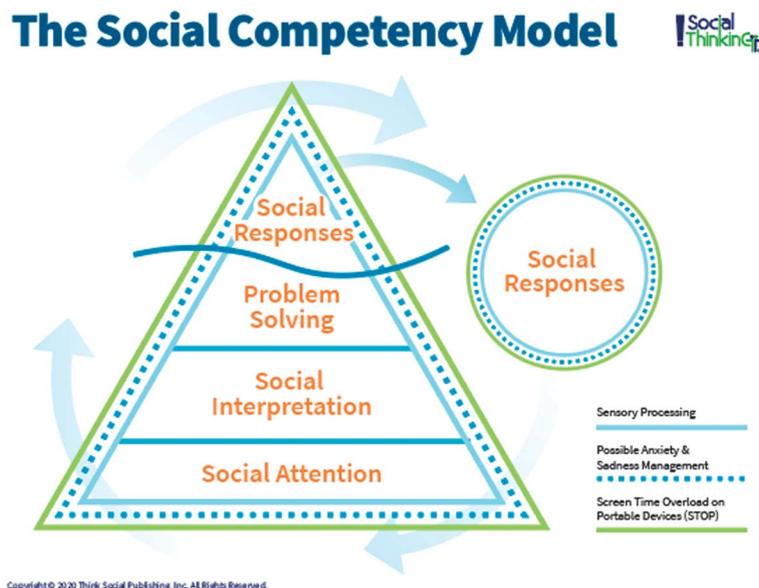
Social Attention requires an individual to attend to others in specific situations and contexts. Without social attention, the development of one's social competencies is not possible. School administrators and teachers often take social attention for granted. However, without it, students would not be able to figure out what is happening around them in the classroom or on the playground (the situation)

to understand how to function as part of a group and so forth. Because most children have spent years attending to and interpreting the social world before coming to school, their minds are prepped and ready for reading comprehension within written text. To that end, from their early school years, students are expected to describe "the setting" of a novel or storybook as well as naturally infer how the setting connects to what may be happening with the characters in that setting.

In typically developing, Social Interpretation occurs when an individual's brain naturally focuses social attention to interpret socially based information. Social interpretation is more than making inferences; it involves understanding self and others to make sense of people's information, plans, intentions, and even humor! To interpret well is to understand that each person has unique thoughts and feelings while we share information, plans, and goals. Research in early child development teaches us that, from a very young age, children are considering what others might be thinking and feeling as part of what they are thinking and feeling (Tomasello, 2009). Individuals who are actively developing their social interpretation skills are engaged in basic socially based critical thinking starting at about age 3 years.

Problem Solving—*socially based* problem solving to be precise—emerges from the ability to attend to and interpret relevant social information. When humans engage in problem-solving, they consider many different variables (the potential problem, different points of view, each person's desired goal, the choices they have to accomplish said goals, the consequences of each of the choices, etc.). One does not need a large "problem" to engage in this process. Virtually every aspect of our social responses is determined through a problem-solving approach.

Figure 1. The Social Thinking–Social Competency Model. Adapted with permission.



Social Responses encompass different types of social behaviors, including one's nonverbal social behaviors (facial expressions, gestures, touch, body stance/orientation, silence, ignoring, etc.) and one's verbal responses (concrete and figurative language, tone of voice, pace of speaking, etc.). Individuals choose their social behavior(s) by considering how our words affect the possible way others are going to interpret their actions. They also use and/or modify their social responses differently in different contexts (building a friendship, working in peer groups in school, working on a team as an employee, working collaboratively with people in the community/team/place of worship, etc.).

The core of the ST-SCM helps illuminate the process through which people form social responses tied to each situation's (often unstated) social norms. Most importantly, interventionists need to understand that each part (attend, interpret, and problem solve to decide the social responses to produce) represents social competencies all individuals use throughout their lives and provide a sequenced treatment pathway for the child with CAS.

The Early Social Dance of Engagement and Observation

When development is going as expected, babies arrive on the planet with the ability to cry and vocalize to make needs known. Responsive caregivers react to those sounds, read intentions, and satisfy needs. This responsiveness is the earliest experience with reciprocity and provides the bedrock of understanding that underlies the capacity to perceive and interpret the behavior of others and to engage in the social landscape as we grow.

Babies learn to attend to the important faces and sounds, as these are the ones that are most responsive and bring what they need. Social landscapes are tied to experiences with families and caregivers—trusted adults lead the way for babies to observe and, where possible, connect with less familiar individuals helping them take in every face, every voice, and every person who peers into the crib, the stroller, or carrier as they move through the world. These faces and the sounds, as well as surrounding contexts become part of the fabric of their social landscapes and foundations for communicative and social development. Responsive caregiving leads to babies having an understanding of communicative noises that are meaningful and are likely the most “important” noises and actions in the environment worthy of attention.

As babies begin to attend to and imitate sound and facial expressions, caregivers cannot help but be pulled into a joyous dance of call and response. Through these interactions, babies begin to recognize this initiation and reply in kind. Research has shown infants as young as 6 months of age recognize the impact of vocalizations on shared experience and seem to understand that their sounds will engage parents (Carpenter et al., 1998; Franklin et al., 2014). Shared smiles and interactive cooing are the foundation of mutual engagement and early evidence that babies are attending,

gathering information, interpreting the sounds and expressions of others, and finding them meaningful. Parents who imitate smiles and match cries with frowns are creating and reinforcing a social–emotional and communicative loop. In this way, babies begin to understand emotion and recognize their own as they watch their parents' faces, hear their voices, and engage in the social and emotional dance. Pairing these sounds and changes in expression with shifting gaze in context is the basis of joint attention, joint intention, and mutual emotional experiences that will give rise to empathy down the road (Tremblay et al., 2005).

These early experiences of acting and attaining reaction and emotion sharing are critical developmental occurrences between caregiver and child. In addition, the circle of connection continues to develop and is maintained in direct response to the caregiving they receive (Greenspan & Greenspan, 1985).

The Role of Imitation in Social Learning

For most babies, imitation just happens as part of an innate developmental process. They are, in a way, hard-wired to observe and imitate others. Meltzoff (2005) refers to this as “like me” experiences as babies and toddlers recognize in others behaviors that exist in their own repertoire. The crux of Meltzoff's hypothesis is that infants use their own actions as a framework for interpreting the actions of others. This innate matching of self to other (imitation and the recognition of being imitated) is the bedrock of our capacity for empathy, role taking, and understanding the perspective of others. This learning evolves into “social schemas” about people and place in a context that toddlers can call upon when they move through their social landscapes. The infant/toddler brain intuitively focuses on relevant social cues (Tomasello, 2009), helping him or her attend to the social behavior of others, expanding their repertoire of engagement and building their understanding of the intentions of others (Meltzoff, 2005). Babies are born with collaborative, imitative brains, which provide the physical structure from which social concepts can emerge and develop through social play with caregivers, social observation of adults and peers helping them to make sense of how the world works and ultimately leads them through play and interaction to figure out how to navigate to regulate in the world. The result is the evolving development of contextually based theory of mind and, ultimately, perspective taking (Winner et al., 2016a).

However, what happens when a baby is very quiet or has reduced social engagement? Or, what about when motor imitation is difficult? We have made the case that observation, experiences, imitation, and social engagement are all critical to early social development and that caregivers are part of the equation. So what happens when both parties do not play their role? The research tells us that parents and caregivers talk less when babies do not respond in kind (Perry Carson et al., 2007). Overby and Caspari (2019) discovered reduced volubility and variability in sound

production in young children later diagnosed with CAS as compared to typically developing peers. Simply put, these babies and toddlers made different sounds and fewer of them. Following this line of thought, it would not be a reach to say that parents, caregivers, and siblings of those with CAS have fewer initiations about which to respond and that babies receive fewer responses because of the limited number of imitations on their part. This, in turn, leads to a reduction in their social exposure, their social interactions, and most importantly their social practice. In addition, we know that social and emotional knowledge and social competence are built through social attention, social interpretation, social problem-solving, and social practice or responses. This process occurs through repeated experiences of observing, making guesses about the thoughts and intentions of others, interpreting and acting on these guesses, and gauging the responses of others.

What does this mean for the baby later to be diagnosed with CAS? A weaker social-communicative loop secondary to reduced exposure will impact the ongoing evolution of social learning, leading to a shakier foundation and therefore making it difficult to support the necessary social learning.

Social Learning and Social Referencing

Neurotypical toddlers are moving out into the world, their interactions are more purposeful, and communication is far less about satisfying wants and needs. Toddlers and twos are looking, sharing, and communicating about what they see, hear, and do and also about what others are doing and saying. They are watching and referencing, noticing caregiver reactions, and adapting behavior as a result. They have figured out words have power and are utilizing them to their own advantage.

However, what about when a toddler has few or no words or when the sounds and words they do have are not comprehensible to others? When they have difficulty making wants and needs known and when reactions are confusing and cause others to do and say things that are not contingent to their thoughts and intentions, how will this impact the social growth of the child with CAS? Perry Carson et al. (2007) found that parents of children with speech and language impairments recognized changes in their behavior that impacted their parenting including describing themselves as “less nurturing” and, consequently, their children as being less attached with reductions in social reactivity. They played together less often, read with their child less often, and overall were less responsive to their needs.

How does this decreased responsiveness impact? Social interaction is a feedback loop, what one puts out impacts what one gets back. When a child is less “verbally communicative,” people talk and interact less frequently with them. This critical loop is the fuel for word learning, social interaction, self-regulation, and developing relationships. With this in mind, it is not a leap to say communication impairment such as CAS is much more than just an issue of expression—it is an issue of relationship

development, with its root in early development (Carson et al., 2007).

Deepening Social Understanding, Practice, and Play

As children move into the preschool years, play is the vehicle of social learning that happens away from beloved caregivers. Peer interactions are a buzz of confusion. Peek into early childhood classrooms and there is much going on. Some children will be in the pretend play corner talking over the plan and then playing it out; some will be at a sensory station sharing space or on the rug sharing toys and play activities. Others will be wandering from place to place figuring out what they want and/or can do and figuring out how and where they can insert themselves. They arrive at the door with a goal in mind, leading to the formulation of a plan. Not only are they thinking about what and with whom they want to play, they are observing the scene and adjusting their behavior in response to expectations both stated and hidden. Those adjustments are made because being a good player and making sure others want to play with you entails keeping in mind the plan of the group and one’s role within it, what others are thinking and feeling, being flexible, sharing ideas, and making sure one’s words and actions align with how one wants to be thought about and seen. This social play requires one’s capacity for social executive functioning which rests on the foundation of shared intentionality, social attention, and perspective taking (Hendrix et al., 2013).

This bedrock of social knowledge is what preschool and early elementary students use to survey the landscape and selectively attend to the people and meaningful actions (utilizing their social attention), interpret what they are observing, and make choices about what they should and should not (and will and won’t) do—all while keeping in mind their own goals and those of others as both independent and, at times, interdependent (social problem-solving). They see where they meet and where they do not (perspective-taking and social self-awareness) and make timely small adjustments to meet or adjust their goals to keep everything running smoothly (self-regulation in a group). In addition, the most amazing part of this is they are not consciously aware they are doing it. Each of these many small interactions across the day rests on the ability to communicate, negotiate, and share imagination. Preschoolers are using their socially based executive functioning skills in every interaction in every corner of the school setting (Hendrix et al., 2013).

Our social cognitive abilities run at the level of semi-consciousness for those who are older and are able to stop and think about their thinking. If people had to take conscious notice of every small perception and run it through a deliberate filter before they reacted, one might be frozen in place much of the time. Every person is problem-solving collaborative experiences minute by minute when they wait their turn, hold the door for someone carrying heavy packages, and ignore a sharp tone from a friend having a

difficult day. Even when not planning to interact with others, people problem-solve sharing space effectively. In each interaction, people are monitoring and interpreting their own behavior and the behavior of others. It is a constant boomerang of thoughts, actions, interpretations, and reactions. They are not mindful of each of the hundreds of small social problem-solving interactions one has every day to meet individual or shared goals, unless something happens that is out of the ordinary, counter to those goals, or unexpected in the context. When that happens, one stops, thinks, and actively problem-solves and considers if there is a different choice to be made. How does this happen? Through use of socially based executive functioning, many think executive functioning is only about setting goals and organizing to get a job done. In fact, social information processing is all about the kind of multitasking skills embedded within the human capacity for executive function and control.

Successful social multitasking starts early in development, it continues in play, and it is then reinforced in each sociocommunicative interaction with others. To be a good player, one needs to keep in mind the plan, one's role, the roles of play partners, and the movement of the scenario across time and space as it adapts and changes in reaction to the ever-shifting ideas of all the players. All of this happens at a very fast pace, and a successful player is keeping all this in mind while also doing their part to keep it moving along. Now layer on the challenges of motor planning movement sequences in order to communicate one's thoughts and feelings, the challenge of keeping up with play becomes ever much more complicated.

When the challenges of communication in the context of CAS limit ability to interact and play with peers, a child will miss many of the essential experiences that help develop and practice social learning. Flexibility, shifting and adapting, and reacting to peer judgments, actions, and reactions are crucial to developing social understanding and social self-awareness (Crick & Dodge, 1994). A communicative deficit will impact every level of the preschool experience. How does one communicate, negotiate, and engage in the developmentally crucial pretend play, share aloud reading sessions, and participate in group learning experiences such as morning meeting when the sounds and words you have do not match those of your peers? In addition, what is the impact when your peers have a difficult time understanding you and your ideas? Communication is the medium through which we experience thought, intentions, information, and much of our social engagement, and because of this, it has a deep and consequential impact on the quality of our relationships (Beauchamp & Anderson, 2010).

Communication (verbal and nonverbal) and social development are interwoven and move along lockstep through early childhood. As noted, this is a bidirectional influence; quieter babies (as is the case with CAS) are often spoken to less, which shapes both the volume of output and number of responses they receive, thereby reducing the time spent in enriching conversation and overall interactive experiences with caregivers and then peers that shape

and develop the social mind. Research revealed lingering deficits in learning, communication, and social participation into the school years (Sylvestre et al., 2013).

Connecting Social Developmental Information Back to CAS

In studying parental experience and perception related to having a child with CAS, Rusiewicz et al. (2018) found four areas of concern with both roots and results related to social competency: intelligibility, challenges with peer relations, and emotional frustration. Each is a crucial factor leading to the potential of a social cognitive deficit over and above the communication challenges. Research reports that there is a direct relationship between linguistic ability and the quality of social relationships. Children with early delays have documented diminution in the quality and quantity of social pairings, leading to reduced participation in the social experience (Mostow et al., 2002).

For children with communication impairments, there is considerable evidence for difficulty participating in the social landscape leading to ongoing rejection by peers (Rice et al., 1991). Research supports findings that children with communication issues, both expressive and receptive, demonstrate residual social deficits well into their teens and beyond (Sylvestre et al., 2013). Lingering deficits in control of pitch, tone, and intonation place a preteen at risk with peers as so much of the communicative experience is influenced by subtle yet significant changes in pitch that indicate irony, sarcasm, humor, and deception.

Friendships rest on the ability to communicate and reciprocate thoughts and feelings and to recognize intentions. Early on, children practice the intention reading, problem-solving, and reciprocal sharing of important and over time intimate information that is the basis of close friendships through their collaborative pretend play experiences. Children with communication impairments are often more isolated from peers beginning in their early preschool days, as communicating and sharing ideas and understanding the plan of the group are fundamental to this play. Missing this important practice concomitant with lingering communication and intelligibility issues often results in ongoing reticence to engage for fear of rejection and, ultimately, anxiety and withdrawal lingering well into the school years and beyond. This is why we are talking about social cognition in this special edition about CAS. While it is beyond the scope of this short article, it is important to consider that CAS can exist as a pure finding, but often, it is concomitant with language and learning disorders, autism spectrum disorders, attention-deficit disorders, and other forms of coordination disorders, each with known complications and implications for deficits in social competence. Some children with CAS do not come to their social challenge neurobiologically, but rather through lack of experience and all-important play and relationship practice. The foundational language comprehension and cognitive ability to learn through language is present, but immersion in

the typical social experience has been deficient in quantity and quality. How and when we intervene must take into account the child in front of us, our knowledge of typical social development, and the way children learn. Our goals and the deeper theoretical information that guide clinical decision-making should be the cornerstones.

Start Early, Build Connections, and Practice a Lot: Intervention Pathways

While it is important to intervene early, clinical impression suggests that many children with CAS do not get a diagnosis or any sort of intervention until years of social learning opportunities have passed. Typically a child is not diagnosed until the very early preschool years. At that point, social knowledge deficits are already present secondary to reduced practice, overreliance on adult relationships, and years of playtime spent going to therapy appointments.

Toddlers

As such, intervention for the very young child with CAS must first account for early communication deficits and then focus on relationship-building interventions such as DIR/Floortime (Greenspan & Wieder, 1998). Early on, when and if babies are lucky enough to be identified as “at-risk” early enough, the goal is to encourage caregiver child interactions that are naturally communicative despite speech sound weaknesses. Infants learn by exploring and receiving feedback from their entire body. Baby play should be all about touching, smelling, hearing, seeing, and tasting the items in their environment. At this early sensory–motor stage of development, babies are learning by exploring and getting feedback from their entire body. Caregivers are moderating and modulating the experience, talking, tickling, and smiling as babies react and respond. The DIR/Floortime model is parent mediated and supports parents in their natural interactions with their child—promoting their development across the range of social expectations for young children, including regulation, joint attention, communication, and language. Floortime essentially means joining the child where they are, revisiting previously missed growth opportunities, and moving forward. Helping a parent find ways to play, to engage in those critical reciprocal and imitative games, often in the absence of or less-than-optimal speech sound environment, is crucial. Helping the parent to engage and play, despite a quieter baby or one that is lagging behind peers in making a variety of sounds, is largely about parent education, modeling facilitating interactions, and child monitoring. Knowing the milestones and timely check-ins can ensure a child is meeting expectations.

Intervention in the toddler years is all about making connections. For a child with CAS, this is about carefully orchestrating the play experience so that the communicative demands are ones that are familiar and authentic and yet also ones that can be practiced. Therapy should be multifaceted,

with time spent playing with toys and creating speech targets that are relevant and communicatively meaningful and ones that will enable a toddler to play near and, if possible, with a peer. Teach the concept of “think with your eyes” to see who is in the room, and make choices about who and what to play with. Notice what others are doing, and think about joining their play. Facilitate sharing materials and engaging in imitative motor acts with a matching set of toys. Choose speech targets including words, proto-words, and power words that are relevant to the toys to ensure the child has something to say when playing with a peer. Being able to say, “EEK,” “uh oh,” or “Oh NO!” as a tower falls or “Me Too” when engaged with turn-taking games and toys will go a long way toward assuring everyone gets to play and the child with CAS is a full participant in the experience. Help them with the words and actions they need (“oops”) to problem-solve solutions when the inevitable social mistake occurs.

The goal is to be sure they are having those important play experiences that enable them to observe, interpret, decision-make, and respond in ways that build their understanding of social intention and interaction, despite their communicative weaknesses. Helping the child with CAS to learn when it is and isn’t their turn is also crucial. Often, therapy is so focused on making sure a child with CAS is included that clinicians and parents forget to teach them how to observe the people and context in order to fully understand the reciprocal context of social interaction. Having an adult present to mediate the experience for the child and also for peers can be so beneficial.

Preschool

Intervention for preschoolers is all about teaching awareness of how the social world works, leading to working on how the child functions in that world. It is at this point that the ST-SCM is useful as a place to start guiding and directing social attention, helping preschoolers to notice their peers, and make guesses about their thoughts and feelings. The focus at this point in development is to understand that thoughts and feelings can be recognized, interpreted, and changed to meet the shifting expectations in the social landscape. Certain components of the methodology focus on frameworks and strategies to interpret and respond to the social world while learning to self-regulate emotions and behavior to match the expectations of the situation (Dobson & Dozois, 2010; Winner & Crooke, 2009). The methodology focuses on the “why” behind social behavior and then how to accomplish the problem-solving to adapt behavior choices to do what is expected based on the situation and the people.

For preschool and early elementary students, play and literacy are often the platform for teaching important academic concepts; the same is true for teaching social information. Using stories to introduce important social concepts as well as expose early learners to text, predictions, thoughts, and emotions is a great start. Introducing core social thinking vocabulary like “the group plan” to teach the

“we” aspect of intentional collaborative experience and “thinking with eyes” to alert them to important observations can be accomplished through anchor texts that provide social context and knowledge about the social landscape. Social thinking lessons are intentionally designed to share and practice foundational concepts for those in need of concrete and directed social teaching.

When ready to work on play skills, the Group Play Collaboration and Problem-Solving Scale, a set of interactive play experiences, will help clinicians to observe, assess, and then intervene with children who are having difficulty playing at the level of their peers. Based on guidelines for determining where a child falls along a continuum of interactive play ability, the differentiated play activities enter at the point the child is able to play, structuring the learning to help them move toward we-based interactive collaborative play experiences with others. For the child with CAS, this can be crucial because it means preloading the information they need to take the cognitive load off imagining and planning to allow them to focus on attending to the play, their peers, and the chosen speech targets. The play experiences are designed around playing out familiar events and stories; choosing scripts and roles that are recognizable and able to be practiced; scaffolding the experience by creating social targets that “work” (taking phonetic complexity into account) for play; and having meaningful, functional phrases that can be utilized to further interactions in play. Within these experiences, it is crucial to choose speech and language targets that cover a range of communicative functions that a child will need for authentic social engagement. Targets for commenting, interjecting, asking questions, adding thoughts, and requesting play are crucial.

Older Children

As children get older, the complexity of the social landscape will necessitate monitoring and assessing social competence along the way. Some children with CAS with early social intervention will gradually make their way into the social landscape and need little more assistance. Others are at risk for anxiety, withdrawal, and peer rejection. The need for targeted interventions to target competencies related to relationship building and maintenance with peers and teachers, complex problem-solving, and social responsibility as well as considering psychotherapy for concomitant mental health challenges should be part of the annual developmental assessment.

Tips for Toddler Play and Intervention

These are the following:

- Serve and return: Choose targets that give them ways to initiate and to respond.
- Notice the child’s attention and make sure that being attentive to others is part of every session.
- Engage in play activities that require joint action routine.

- Support and encourage the interests of the child; choose words and targets that help them to have meaningful interaction with others.
- Build capacity for facial expression, gesture, and body language (both producing and interpreting).

Tips for Preschool Play and Intervention

These are the following:

- Choose target utterances that reflect the child’s unique environment, interests, and motivation.
- Choose target utterances connected to play scripts and roles.
- Create nonverbal and less verbal roles for play.
- Choose targets that are socially relevant and add gesture and body language.
 - greetings (Hey, bye)
 - requesting (I need, you do)
 - noticing (I see)
 - rejecting (No way, not mine)
 - protesting (No)
 - disagreeing (nope)
 - asserting (I do)
 - sharing information (see, wow)

Conclusion

As speech and language pathologists, our ultimate goal is to use our expertise to facilitate better communicators, regardless of the area of intervention focus. While early treatment is important for all, it is extremely critical for those with CAS. Knowing that this group of individuals often receives a later diagnosis means early challenges ripple into later challenges, creating a domino effect, widening the communication and social competency gap. It is the responsibility of all therapists to consider the whole child and remember that, as important as our motor speech goals are, keeping pace with peers in the social landscape gives a child the motivation to keep practicing and the skills they need to be full participants in all arenas of their life. Clinicians must be ardent advocates to tackle not only speech and language but also social competencies. They must be ready to support not only the child but also the whole family early and with efficiency. Speech-language pathologists are truly the only professionals equipped to lead this charge, so let us arm ourselves with tools to make a difference in the lives of children with CAS and their families.

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