Addressing Social Competence in Autism Spectrum Disorders;

Practical Strategies Derived from Contemporary Neuroscience

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The neurology of social competence • Contemporary research in the neurodevelopment of social competence has fostered a greater understanding of those with and without vulnerabilities in these areas.











Unique neurological differences in social communication development in ASD

• Children with Autism Spectrum Disorder (ASD) show limited neural sensitivity to social stimuli and tend not to look toward people's faces.

Unique neurological differences in social communication development in ASD

- Children with these vulnerabilities tend not to look toward others or tend to look at the mouths of the speaker.
- Limited shared positive affect is an early indicator of these differences.

Unique neurological differences in social communication development in ASD

• Children at risk for ASD miss gaze shifts between people and objects. They have difficulty predicting actions and initiating bids for engagement.

Unique neurological differences in social communication development in ASD

• Similarly, when neurotypical children hear speech sounds, these are processed as social or intentional stimuli, while children with vulnerabilities simply hear sounds, making the intentions of individual words more ambiguous.

Unique neurological differences in social communication development

- Individuals with social and emotional vulnerabilities may process social stimuli (e.g., faces, speech sounds) in regions of the brain typically reserved to process images and sounds that are non-biological.
- This makes predictions of actions, intentions, and emotions less efficient and more intellectual.

Unique neurological differences in social emotional development

• Secondary challenges arise as a result of a history of repeated failure with social interactions & a limited repertoire of conventional strategies for coping with these challenges.





"To me, the outside world is a totally incomprehensible mayhem which terrifies me."

Ros Blackburn (2005)

"My primary emotion is, and has always been fear".

Temple Grandin (2006)

Ros Blackburn on ASD

"If behavior were the issue this would be no different than naughty child syndrome."









The primary domains of SCERTS[®] addresses these priorities

• SC - Social Communication; Supporting a student's ability to communicate, comprehend, and collaborate with others,

The primary domains of SCERTS[®] addresses these priorities

• ER – Emotional Regulation; Supporting a student's ability to cope, make transitions, and active engage in the classroom

The primary domains of SCERTS[®] addresses these priorities

 TS – Transactional Support; learning accommodations and curriculum modifications embedded in the natural environment to foster SC and ER

> Social Communicative Competence; Vulnerabilities in ASD

In children with ASD, social communicative competence is affected by challenges in all three of these critical dimensions.

Social Communicative Competence; Vulnerabilities in ASD

- SC Social Communication; students with ASD show limited initiations, difficulty with social forms of language, and limited understanding of social norms and perspectives,
- ER Emotional Regulation; Difficulty predicting that others are source of engagement or support leads to both underarousal and over-arousal; this, paired with limited ability to learn how to cope from others leads to unconventional coping strategies.
- TS Transactional Support; the "invisible" nature of ASD makes it difficult for communicative partners to recognize the need to externalize one's thoughts and create accommodations.

The SCERTS framework identifies priorities across these developmental stages

- I. Social Partner Stage (i.e., children who are communicating through pre-symbolic nonverbal means),
- 2. Language Partner Stage (i.e., children who are communicating through early symbolic means, as expressed through verbal language, signs, or pictures).
- 3. Conversational Partner Stage (i.e., children who are communicating through sentence and conversational level discourse).

Social Partner Stage / Before Words Fostering Social Competence

Social Partner Stage / Pre-symbolic;

Impact of neurology on the development of social competence

- Children with vulnerabilities at this stage often do not find initiations with social stimuli intrinsically rewarding; thus, it is difficult to predict that a caregiver or teacher is a source of engagement or assistance.
- Facial and gestural forms of communication are initially delayed.

Social Partner Stage / Pre-symbolic; Impact of neurology on the development of social competence

- Gestures tend to involve physical manipulation (e.g., pulling a caregiver's hand) rather than using a gesture to send a "shared message" to others (e.g., giving, pointing, showing, pushing away, waving, and a head nod / headshake).
- As language has not yet emerged, emotional regulation remains limited to behaviors or sensory-motor actions, many of which are generated from trial and error as a means to self-soothe, self-stimulate, and request comfort.











Language Partner Stage / Emerging Language; Impact of neurology on the development of social competence

- Children with vulnerabilities at this stage often show a preference for object labels (i.e., nouns), i.e., nonsocial language forms, versus more social language, namely subjects (i.e., people's names) and verbs (e.g., action words).
- If language has not yet emerged, children often continue to rely on behavior to regulate emotion and to make transitions (e.g., adhering to sameness / hording)

Language Partner Stage / Emerging Language; Critical priorities

- Increasing range of spontaneous communication involving others (e.g., requesting social actions and social routines, commenting on actions, and sharing experiences with others).
- Increasing range of word combinations for subject + verb (e.g., "Sarah open the cookies," "Jason shoot baskets," "Jamie pour the juice.")
- Increasing use of language for emotions, requesting soothing actions, and for talking through transitions









Conversational Partner Stage Fostering Social Competence

Conversational Partner Stage;

Impact of neurology on the development of social competence

- Children with vulnerabilities at this stage continue to show difficulty with predicting the intentions of others, a challenge which impacts the development of self-efficacy as a communicator and the ability to establish and maintain peer relationships.
- This challenge also limits the development of more sophisticated syntax to clarify intentions, knowing how to pick topics, when to initiate, how to balance conversational turns, and collaborating and negotiating with others.











Developmental Stages of Autism Spectrum Disorders (ASD);

Impact of Neurodevelopment and Critical Priorities on Social Communication Development

Children with ASD face different neurodevelopmental challenges as they progress through developmental stages. Critical priorities at each stage should be considered, as these areas are often barriers toward shifting developmental stages. The following core challenges and critical priorities for each developmental stage are outline below:

Social Partner Stage / Pre-symbolic; Children with ASD at this stage often do not find initiations with social stimuli intrinsically rewarding, as it is difficult to predict that a caregiver or teacher is a source of assistance; thus, even facial and gestural forms of communication are initially delayed. When they do emerge, gestures tend to involve physical manipulation (e.g., pulling a caregiver's hand) rather than using a gesture to send a "shared message" to others (e.g., giving, pointing, showing, pushing away, waving, and a head nod / headshake).

Critical priorities:

- Increasing functional, spontaneous communication, as a high rate of nonverbal communication (i.e., 2 communications per minute in highly motivating situations) = language acquisition and social relationships.
- Increasing conventional gestures that have a shared meaning (e.g., giving, pointing, pushing away, head nods, and head shakes).

Language Partner Stage / Emerging language; Children with ASD at this stage often show a preference for object labels (i.e., nouns), i.e., nonsocial language forms, versus more social language, namely subjects (i.e., people's names) and verbs (e.g., action words). This is likely due to a limited appreciation of the intentions of others and limited gaze shifting toward people and between people and objects. As subject + verb word combinations are predictive of creative language acquisition, limitations in this semantic relationship lead to a reliance on object labels and rote sentence structures

Critical priorities:

- Increasing range of spontaneous communication involving others (e.g., requesting actions and social routines, commenting on actions, and sharing experiences with others).
- Increasing range of word combinations for subject + verb (e.g., "Sarah open the cookies,"
 "Jason shoot baskets," "Jamie pour the juice.")

Conversational Partner Stage; Children with ASD at this stage continue to show difficulty with predicting the intentions of others, a challenge which impacts the development of self-efficacy as a communicator and the ability to establish and maintain peer relationships. This challenge also limits the development of more sophisticated syntax to clarify intentions, knowing how to pick topics, when to initiate, how to balance conversational turns, and collaborating and negotiating with others..

Critical priorities:

- > Increasing spontaneous communication with one's peers and a sense of self-efficacy.
- Increasing awareness of social norms of conversation (e.g., balancing turns, vocal volume, proximity, conversational timing, and topic selection).

SCERTS Practice Principles for Success - Checklist	Date: Follow-up Date:		Next steps		Next steps		Next steps		
			What supports are working		What supports are working		What supports are working		
	Student Name: Target Activity / Subject:	Describe what the student did well	Visual Structure & Organization Is the student predicting	 the purpose of the task (sensory exploration / cause & effect / tied to special interests or real-life events) the sequence of activities (activity baskets, photo/picture schedules, written day planner) the steps within the activity (count down strips, visual timers, written help box) their role in the activity (clear visuals indicate expectations, turn-taking, and roles) 	Social Communication Supports Is the student predicting	 when to initiate (the activity includes opportunities for student participation) what to say (visuals such as objects, photos, pictures, written words remind the child how to ask for help, comment, respond to questions, etc.) 	Emotional Regulation Is the student predicting	 how to regulate their emotions (access to sensory supports, visuals choices of coping strategies) that others are responsive and a source of emotional support 	Copyright 2012 – All Rights Reserved