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Vanderbilt SLP Journal Club:
Technology and Autism: A Refocus on Parent-Child Interaction

Anna Ausborn Kulaski, MS, CCC-SLP;
Daniel Shaw, MS, CCC-SLP

Moderated by:
Amy Hansen, MA, CCC-SLP, Managing Editor, SpeechPathology.com

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Anna Ausborn Kulaski, M.S., CCC-SLP
Kenton O. Shaw, M.S., CCC-SLP
Pediatric Speech-Language Programs
Vanderbilt Bill Wilkerson Center
Learning Objectives

After this course, participants will be able to:

- Summarize the American Academy of Pediatrics guidelines for technology usage when counseling parents.
- List at least 3 parent strategies for utilizing technology to engage children with autism.
- Describe how the atypical sequence of development of nonverbal joint attention skills in young children with autism can impact use of technology.

Introduction

- 1.7% of children (1/59) in the U.S. are diagnosed with Autism Spectrum Disorder (ASD) by age 8.
- 36% of 2 year olds have a television in his/her bedroom.
- Children < 8 years old average 2 hours, 19 minutes of daily screen media.
- Children with ASD tend to prefer screen/media time to the exclusion of other play activities.
Before We Start…

- How many of you work with children with ASD?
- How often do you counsel parents about screen time?
- Are you comfortable counseling parents about screen time?
- Are you comfortable teaching parents how to use screen time to engage their children in interactions?

Key Developmental Terms

- Joint referencing
- Joint engagement
- Joint attention
- Social referencing
Is this joint attention?

Joint Attention

- Definition for this presentation:
  - ASHA defines joint attention as “focus with someone on the same object or event”
  - shared enjoyment of an object or event with another person
  - involves coordinated and alternating attention between a person and the object or event
  - both people know that they are attending to the same thing (Sussman refers to this as “knowing together”)
  - the goal or motivation is social attention or social interaction NOT access to an object
Joint Referencing

- Sharing attention on an object or event
- Developmental sequence:
  - 1) child learns to maintain eye contact,
  - 2) child responds when named called,
  - 3) child follows point toward object or event, and
  - 4) child looks toward named objects, verbal-only
- Developmental progression moves from following gestural cues to verbal-only cues
- Often mistaken for joint attention
Joint Engagement

Child and partner engaged with the same object or event, but no overt acknowledgement of the other’s presence.

Social referencing

- Looking to see if someone is watching them; checking in to see if activity is ok or safe.
Attention: Dyadic vs. Triadic

- **Dyadic**
  - attention between child and object OR child and adult
  - Increasingly sophisticated use between 6-12 months
  - Lays foundation for social connections with others

- **Triadic**
  - Child shifts attention from person to an object/activity and then back to the person
  - This ability is necessary to the development of joint attention

Prerequisites

What comes first?

- Knowledge/Awareness of others
- Engagement with others
- Enjoyment of the social world
- Shifting Attention
Developmental Sequence

- Look at parents/caregivers, respond to emotional reactions, imitate facial expressions
- Manipulate objects, focus on person OR object (cannot shift attention) [dyadic]
- Smile at others, start interactions with others, persist when caregiver doesn’t respond, motivated socially [triadic]
- Initiate and will persist if there’s not an initial response

(Sussman, et al, 2013)

Children with autism tend to focus on objects more than people.
Tolerance will precede associative play.
Typical Sequence of Acquisition

Nonverbal Joint Attention Skills

Coordinated Looks ➔ Show ➔ Follow Gaze ➔ Follow Point ➔ Point

(Loewry, 2012)

Atypical Sequence

Nonverbal Joint Attention Skills

Coordinated Looks ➔ Follow Point ➔ Point ➔ Show ➔ Follow Gaze

(Loewry, 2012)
AAP Technology Guidelines

- < 18 months: video-chat only; no independent use;
- 18-24 months: may introduce high-quality programs/apps; no independent use;
- 2-5 years: ≥ 1 hour of high-quality programming per day; no independent use;
- Keep bedrooms/mealtimes/parent-child play screen free;
- No screen time 1 hour before bedtime;
- Turn off devices not in use;
- Avoid using media to calm children;
- Create a Family Media Use Plan. (www.healthychildren.org/MediaUsePlan)

Strategies

- Focus on
  - Content: quality programming is associated with better language outcomes if child understands the program
  - Context: What is happening around child while viewing the screen?
    - Engage the child when s/he looks at a screen
    - Relate the information to child’s experiences
    - Bring information from the screen to real life
  - The individual child: Set limits based upon child’s age, interests, skills, and abilities. Continue to evaluate and adjust screen time limits accordingly.
Make Your Own Videos to Teach Specific Skills/Tasks

Ways to Reduce to Screen Time

- Turn off screens when not in use.
- Create screen free times during meals, snacks, and bedtime.
- Turn off screens 1 hour before bedtime.
- Set a timer.
- Sabotage access (i.e. hide remotes, lock screens).
- Avoid screen use at predetermined times.
Alternatives to Screen Time

- Follow child’s lead and provide highly enjoyed items/actions
- Blow/pop bubbles
- Colour/draw/paint
- Go to the park
- Teach child how to help with household chores
- Teach specific play schemes (i.e. puzzles, block play, etc.)
- Sing songs/finger play
- People play (i.e. peek-a-boo, tickle game)
- Make edible messy play (i.e. peanut butter dough, peep dough)
Naturalistic vs. Discrete Trial

- Potential concerns and/or limitations:
  - Adult-directed nature and tight stimulus control
  - Highly-structured nature and use of artificial reinforcers
  - Imitation taught in isolation rather than within naturalistic context
  - “Do this” – goal of JA is spontaneous, independent shifting of attention for a social purpose rather than a response to a verbal command
  - Addresses learning function of imitation but not social function
  - Is the child’s attention functioning as a request? (“taking the form of RJA but not the function”)
Parent Factors

- Be fun, be interesting, give your child a reason to want to play with you
  - Why would child want to play with you if it’s never want he/she wants to do?
  - Why would child want to play if it’s never fun?

- Ways of being with your child
  - Be responsive to their utterances
  - Follow child’s lead, less directive (more comments, fewer questions)
  - Be present: remove distractions such as phones, tablets, background tv
  - Face-to-face, in child’s line of sight

Parent Factors

- Consider “special times”
  - Adapted from Palin Parent Child Interaction
  - 5 minutes of technology-free play
  - Child chooses activity

- Don’t get stuck on perfect, look for “better”
References


Thank You!