

Supporting the Play of Preschoolers with Autism Through Peer-Mediated Interventions

A look into play theory, development, and the importance of promoting play in children with autism.

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Why Do Children Play?

Why Do Children Play?

- **Philosopher Karl Groos**
 - Play had to serve an adaptive purpose for it to persist in various species.
 - More complex species have a wider range of and more complex adaptive skills.
 - Longer childhood allows for practice, elaboration, and perfection of these adaptive skills.
 - Children are concerned with the process of play over the product: Not actually concerned with feeding the baby or cooking dinner, but with the processes involved in carrying out those tasks.

Why Do Children Play?

- **Jean Piaget, psychologist**
 - Children acquire knowledge through interacting with the physical environment
 - Cognitive development occurs through the process of developing schema by assimilation and accommodation.
 - Schema: Categories of knowledge that help us interpret and understand the world

Why Do Children Play?

- **Jean Piaget, psychologist**
 - Play provides children with opportunities to interact with physical aspects of the environment thereby allowing them to reorganize, expand, and further conceptualize their schemas.

Why Do Children Play?

- **Lev Vygotsky, psychologist**
 - When children use objects to represent other objects in play, they set the stage for symbolic thought
 - Allows children to understand that an object (telephone) can be represented by another object (banana), thereby separating the actual physical object from its meaning.
 - Children can then take the step of thinking in the absence of any object
 - Once the child has developed symbolic representational abilities in play, they can then use those abilities to symbolize in other contexts.

Importance of Play

- Language
 - During play, children experiment with language
 - Both become more complex over time
 - Two year old: "Baby eat"
 - Four year old: "Now baby, its time to eat your peas"
 - Use language during play to define roles.
 - Veterinarian: "Poor puppy, you are going to need a shot"
 - Firefighter "There's a fire! Get the hose!"

Importance of Play

- Social Skills
 - Establish shared knowledge to act out jointly controlled play scripts
 - Taking other's perspectives
 - Modify point of view based on others' experiences
 - Join a peer group
 - Enter on-going play activities
 - Manage Disagreements
 - Support one another during social conflicts

Importance of Play

- Cognitive Skills
 - Exploration of objects
 - Understanding of object uses and properties increase: Begin to experiment/explore different uses
 - Creativity and flexibility in play emerges.

What Does Typical Play Development Look Like?

What Does Typical Play Development Look Like?

- Sensorimotor Exploration
 - Undifferentiated actions performed on objects that evolves into more organized play sequences.
 - Mouthing, reaching, banging
 - Pulling, twisting, turning,
 - Combining and using toys as containers to explore relational properties

What Does Typical Play Development Look Like?

- Emergence of Joint Attention
 - At this point joint attention in its "truer form" emerges
 - Social referencing
 - Imitative learning (acting on objects for their conventional use)
 - Gaze/point following
 - Pointing out objects/events
 - This is when the ability for "meeting of the minds" develops

What Does Typical Play Development Look Like?

- **Symbolic Play**
 - **Step 1: Knowledge of the functional use of objects**
 - 9-12 months of age
 - When a child is able to perform a conventional act on an object and use the object appropriately, she has demonstrated knowledge of how that object is meant to be used.
 - The child is not using the object for play, but is using the object for its true purpose, i.e. using a cup to drink, a fork to eat, a comb to comb hair, etc.
 - Later on, being able to pretend depends on this ability to understand objects' functional uses. If you don't understand what an object is used for, you can't engage in pretend with it and play does not move beyond sensorimotor with that object.
 - This continues to develop as the child gets older and is exposed to more and more. As she learns more, she is able to incorporate more into her play.

What Does Typical Play Development Look Like?

- **Functional Pretend Play**
 - **Step 2: Using objects conventionally for the purpose of play**
 - Emerges around 12 months of age
 - Children demonstrate the conventional use of an object for the purpose of play, not necessarily for the object's functional purpose.
 - At this level a child can both drink fluid from a cup, and make drinking motions and sound effects on an empty cup, for example.

What Does Typical Play Development Look Like?

- **Symbolic Play**
 - **Step 2: Using objects conventionally for the purpose of play**
 - Only actions that the child experiences in her daily routine such as eating, drinking, toileting and sleeping are carried out in play, and actions are directed only to the self, not towards others such as a parent or a doll.

What Does Typical Play Development Look Like?

- **Symbolic Play**
 - **Step 3: More abstract play**
 - 12-18 months of age
 - At this level play schemes become more abstract
 - Direct play actions towards others (feed a baby, change a baby's diaper, give mommy a "drink").
 - Engage in play acts that are not a part of her own daily routines. Now she can imitate an adult cleaning, using the telephone, etc.
 - Play actions are still limited to one act at a time.
 - Children only do one play scheme at a time without stringing multiple together. For example, a child might feed a baby doll, but does not incorporate that scheme into a sequence such as feed baby, change baby, put baby to bed.

What Does Typical Play Development Look Like?

- **Symbolic Play**
 - **Step 4a: Combining players**
 - Child can carry out a single play action on multiple players at a time.
 - Take a drink from a cup and then extend the cup to the doll and then to Mommy.
 - The act is the same, but it has been sequenced to multiple players
 - **Step 4b: Combining play actions**
 - Children can also combine multiple actions into a play scheme: feed baby, change baby, then put baby to bed.

What Does Typical Play Development Look Like?

- **Symbolic Play**
 - **Step 5: Internally Generated Play**
 - Emerges around 24 months of age
 - Note: At previous levels play was centered around objects and actions that were present in the child's immediate environment (I see a broom so I will sweep, I see Mommy sweeping so I will sweep).
 - Objects and events do not have to be present for the child to begin a play scheme. Play can be generated mentally, and then necessary props are sought out to use in the play activity.

What Does Typical Play Development Look Like?

- Symbolic Play
 - Step 5: Internally generated Play cont.
 - No longer just symbolizing the conventional use of objects by using them for play instead of what they are functionally intended.
 - Ability to substitute one object for another (banana for a phone, stick for a horse)
 - Treating inanimate objects as if they were animate (pretending the baby can sit up by herself, feed herself, instead of just carrying the action out ON the baby).

What Does Typical Play Development Look Like?

- Symbolic Play
 - Step 6: Advanced abstract symbolic play
 - 3-4 years of age
 - Play relies less on the use of props and more on language to narrate play scripts.
 - Ability to transform selves into different play roles (“let’s pretend I am a dog and you are the baby”)
 - Integrate multiple play scripts to engage in elaborate drama with evolving play episodes.

What Does Play Development Look Like in Children with Autism?

What Does Play Development Look Like in Children with Autism

- Sensorimotor play
 - Level at which children with autism tend to get “stuck”
 - Tendency to manipulate items in a stereotyped fashion
 - Engage in manipulation of objects over functional or pretend play
 - Stereotyped play ranges from banging, shaking, etc. to stacking or lining up objects according to physical attributes.

What Does Play Development Look Like In Children with Autism?

- Symbolic Play: Functional (Steps 1-4)
 - Children with autism are less likely to engage in functional play spontaneously, although functional play is sometimes observed through conventional use of objects and object association.
 - Functional play is less diverse, with fewer different play acts, and fewer play acts put into a sequence.
 - Less play directed towards dolls or other people; when it does occur, functional play tends to be self-directed (Ungerer and Sigman, 1984).

What Does Play Development Look Like in Children with Autism?

- Symbolic Play: Pretend (Steps 5 and 6)
 - Children with autism rarely display this type of behavior
 - When this behavior is displayed it looks different from that of typical peers
 - Less advanced pretend play such as object substitution, treating inanimate objects as animate, and inventing objects that are not real or present.
 - Generate fewer novel play acts. When they do engage in pretend play, acts tend to be repetitive.

What Does Play Development Look Like in Children with Autism?

- **Symbolic Play: Pretend (Steps 5 and 6)**
 - Some evidence that higher functioning children on the spectrum can engage in advanced pretend play when it is carried out in a structured environment.
 - However, this play is less integrated, varied, and flexible compared to typical peers
 - Difficulty spontaneously generating play schemes without context or available props.
 - Play schemes are typically based on highly structured scripts and are evoked by familiar contexts and predictable situations.

Why Don't Children With Autism Develop Play Skills?

Why Don't Children with Autism Develop Play Skills?

- **Lack of Joint Attention**
 - Children on the spectrum do not always learn the conventional use of objects unless explicitly taught.
 - Lack of gaze/point following (children do not readily learn the names of objects)
 - Imitative learning (children do not readily learn the appropriate way to use an object)
 - Without social referencing children do not learn appropriate ways to interact with objects
 - Without knowledge of objects' conventional uses, play does not progress

Why Don't Children with Autism Develop Play Skills?

- **Information Processing**
 - **Local vs. global information processing in typical development**
 - Global processing in typical development refers to the ability to integrate information (visual or verbal) into a coherent whole.
 - Example: When looking at a person's face, global processing allows a person to put all the facial features together to get a "whole" picture of what a person looks like.
 - Example: When listening to music, global processing allows a person to listen to the piece of music as a whole to understand the entire piece and extract meaning from its collective parts.
 - It is through global processing that typically developing children develop their schemas as conceptualized by Piaget.

Why Don't Children with Autism Develop Play Skills?

- **Information Processing**
 - **Local vs. global information processing in typical development cont.**
 - Local processing in typical development refers to the ability to process details and ignore the gestalt or "big picture".
 - Example: When looking at a person's face, local processing allows a person to notice details in their features such as eye color, nose shape, wrinkles, etc.
 - Example: When listening to a piece of music, local processing allows a person to pick out specific notes or sections of notes and analyze those separately from the whole.

Why Don't Children with Autism Develop Play Skills?

- **Information Processing**
 - **Local vs. global information processing in typical development cont.**
 - Evidence suggests that in typical development local and global processing are two separate capabilities that develop independent of one another.
 - Infants up to 6 weeks-3 months appear to process information at the local level, but then begin to process more globally as the skill develops
 - Local processing becomes fully developed more quickly than global processing (around 5 years of age)
 - Global processing takes longer to fully develop (around 8 years of age)

Why Don't Children with Autism Develop Play Skills?

- **Information Processing**
 - Local vs. global information processing in typical development cont.
 - Evidence also suggests that typically developing children are able to use local processing, global processing, or both, depending on what is needed for the task.

Why Don't Children with Autism Develop Play Skills?

- **Information Processing in ASD**
 - Unlike typical children, children with ASD have a difficult time seeing the "big picture" and developing schema
- **Theory of Weak Central Coherence**
 - Suggests that people on the spectrum have difficulty integrating information into a whole and have weakened general processing
 - People with ASD are able to pay attention to details, but do not integrate those details to make sense of the big picture.

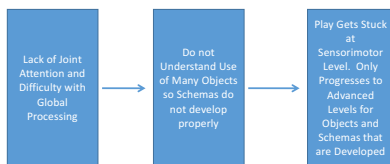
Why Don't Children with Autism Develop Play Skills?

- **Information Processing**
 - What does information processing have to do with play difficulty in ASD?
 - If children with ASD do not develop schemas, they have no schemas to expand, practice, and master through play.

Why Don't Children with Autism Develop Play Skills?

- **Information Processing**
 - Going back to steps one and two of play development:
 - If you aren't able to develop schema about an object and understand its conventional use, you can't use it in play.

Why Don't Children with Autism Develop Play Skills?



Peer-Mediated Interventions

PEERS ARE MORE EFFECTIVE THAN ADULTS AT PRODUCING PLAY
 Teacher directed VS.
 No Teacher VS.
 Teacher guidance only

- Teacher guidance produced most play between children
- NO Teacher involvement produced more play between children than teacher directed.
- LESS TEACHER INVOLVEMENT PRODUCES MORE INTERACTION DURING PLAY BETWEEN PEERS AND CHILDREN WITH AUTISM

How to Set up Play Groups for Children with ASD

- ### How to Set up Play Groups for Children with ASD
- **Play Group Members**
 - **Who should be included in play groups?**
 - Any child on the autism spectrum regardless of ability
 - Fluently verbal students: HF autism
 - Same difficulties with joint attention and global processing as children with more "classic" autism.
 - Non-verbal children with limited or zero imitation and joint attention
 - **Typically Developing Peers**
 - Typical Peers are a critical component of play groups for children with ASD.
 - Remember: peers are an integral part in developing social and play skills. Without peers play groups will be ineffective.

- ### How to Set up Play Groups for Children with ASD
- **Play Group Members**
 - **Group Member Components**
 - 3-6 members
 - There should always be more (or at the very least an equal number of) typical peers than children with ASD
 - In a group of three there should be 2 typical peers and one child with ASD.
 - In a group of five, there should be three typical peers and two children with ASD

- ### How to Set up Play Groups for Children with ASD
- **Play Group Members**
 - **Group Member Characteristics**
 - **When choosing peers it is important to consider the age and ability level of the children with ASD**
 - When possible, choosing peers of similar age is best. However, have to consider developmental level of students with ASD
 - If one of the group members is nine years old but is still only able to engage in Step 2 play, it may be helpful to use either peers who are younger or a mixture of same-age peers and more developmentally appropriate peers.

- ### How to Set up Play Groups for Children with ASD
- **Play Group Members**
 - **Group Member Characteristics**
 - Consider interests and gender of children with ASD
 - Peers with similar interests
 - Mix of boys and girls in the group: having both will allow for a broader range of play.
 - Maturity level of peers
 - Mature for their age, respectful, open-minded
 - "Mother hens" are not always the best option

- ### How to Set up Play Groups for Children with ASD
- **Play Group Members**
 - **Where to find peers**
 - In a typical public school setting peers are normally taken from general education classrooms
 - When getting permission from principal and general education classroom teacher, it is helpful to suggest times that are not very academic-focused
 - Recess
 - Whole school RTI sessions
 - Centers

How to Set up Play Groups for Children with ASD

- **Play Group Members**
 - **Where to find peers**
 - **Parent permission**
 - Send home a permission letter and slip for parents to sign
 - Explain what their child will be participating in
 - Be careful not to give the names of the students with ASD who are participating, and do not mention that they have ASD or are in special education.

How to Set up Play Groups for Children with ASD

- **Play Group Members**
 - **Before starting play groups**
 - Meet with typically developing peers at least once before groups start
 - Explain the purpose of the group (to develop play, socialization and language in the children with ASD)
 - Explain their roles as peer models (to help the children with ASD to learn to play more effectively)
 - Explain that you as the adult will be present to help with the play, answer questions, etc.
 - Allow the children to spend some time in the play setting
 - With all members, explain the Who, What, Where, When of the play group
 - With less verbal students you might present this information visually or in a social story

How to Set up Play Groups for Children with ASD

- **Play Group Setting**
 - Special education classroom
 - SLP office
 - OT office
 - Counselor's office
- Regardless of where the play group is held, it should be done in the same area every time to maintain consistency and predictability.
- Toys should remain in the same accessible area and play should take place in the same designated "play group" spot.

How to Set up Play Groups for Children with Autism

- **Play Group Facilitators**
 - SPED teacher
 - SLP
 - OT
 - Counselor
 - Focus Facilitator
 - Para educator
 - Anyone who knows how and makes time

- **Play Group Toys/Materials**
 - Kitchen items
 - Grocery shopping
 - Dolls and doll props
 - Doctor kits
 - Stuffed animals
 - Cars, trains and tracks
 - Dress up clothes
 - Board games and puzzles
- Blocks, legos,
- Marble runs
- Art supplies
- Figurines
 - Animals,
 - Superheros
 - GI Joes
- Play Doh
- Bubbles
- Balls

How to Set up Play Groups for Children with Autism

- **Play Group Logistics**
 - **At first meeting**
 - Introductions
 - Establish Play Group Rules
 - Decide on a Play Group Name
 - Design Play Group Logo/ Chant
 - Allow some time for playing and getting familiar with the toys and time for an ending activity such as snack

How to Set up Play Groups for Children with ASD

- **Play Group Agenda**
 - Predictable schedule to be followed each session
 - Start with Group meeting
 - Greeting game/Hello Song (if age appropriate)
 - Discuss what the children would like to play that day (this does not have to be hard and fast, it just gives some structure around which the play can get started).
 - Assign roles as needed depending on what games/play activities are chosen
 - Review play group rules
 - Play
 - Clean up
 - End with snack or some other closing activity
 - This Schedule can be presented visually

How to Set up Play Groups for Children with ASD

- **How to Guide Play**
 - **Roles of the Adult: Highest Level of Support**
 - Recognize and help peer models respond to/interpret play initiations from students with ASD
 - Children learn language when engaged in joint attention with others. If a child with ASD is attending to a particular toy or play scheme it is important to respond and engage in that activity.
 - Assigning roles in play schemes
 - Scripting actions and dialogue
 - Partnering peer models and students with ASD

How to Set up Play Groups for Children with ASD

- **How to Guide Play**
 - **Roles of the Adult: Medium Level of Support**
 - Offering suggestions
 - Posing Leading Questions
 - Look at what ___ is doing. What do you think s/he wants to play?
 - What could you do to get ___ involved?
 - What roles do you all have?
 - What role do you think ___ want to play?
 - Commenting on the play
 - The store is losing its shoppers
 - The cashier is waiting for the shoppers to check out
 - Redirecting and reframing the play scheme

How to Set up Play Groups for Children with ASD

- **How to Guide Play**
 - **Role of the Adult: Lowest Level of Support**
 - Stepping back and watching
 - Being ready to step in as needed.
 - At this level of support it sometimes feels as if you are doing nothing. But, if play is flowing, it is best to let the peer models take the lead!

How to Set up Play Groups for Children with ASD

- **Assessing Play Skills**
 - **What skills should be assessed**
 - Depending on the ability level of the student,
 - Joint Attention (refer to the levels of joint attention as it progresses)
 - Language Development
 - Play initiations (this will look different in every student depending on their abilities)
 - Initiations (verbal and play)
 - Reciprocal interactions (verbal and play)
 - Types of play (parallel play, imitation, joint focus, joint action, role enactment, role playing)
 - Turn-taking
 - Other IEP goals on language/social skills

How to Set Up Play Groups for Children with Autism

- **Assessing Play Skills**
 - **Assessments to Use**
 - SCERTS
 - Do-Watch-Listen-Say
 - Peer Play and the Autism Spectrum
 - VB-MAPP