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# Impact of Motor Learning: Clinical Evaluations, Assessments and Interventions

Presented by:

Mariah Woody, OTR/L &
Lisa J Roehl, PT, DPT
Board-Certified Clinical Specialist
in Pediatric Physical Therapy

# Lisa Roehl, PT, DPT, Board-Certified Clinical Specialist in Pediatric Physical Therapy

- Lisa is a physical therapist with 10 years of experience in pediatrics. She received her Doctor of Physical Therapy degree from the University of South Carolina in 2009. Lisa has worked within outpatient pediatric clinics, serving a variety of patient populations and ages. She is trained in TheraSuit® and TheraSuit Method®, with the provision of an intensive therapy model for children with neurological disorders from 2011-2013 in Columbia, SC. She specializes in the neurological population and early motor reflex integration. Lisa became a Board-Certified Specialist in Pediatric Physical Therapy in 2019. Lisa currently works in Greenville, SC at Advanced Therapy Solutions, Kids.

# Mariah Woody, OTR/L

- Mariah is a graduate of the Medical University of South Carolina and grew up in Kentucky. Mariah is a former Applied Behavior Analysis therapist for children with autism, and that is how she fell in love with Occupational Therapy. Mariah is an Interactive Metronome provider, and Integrated Listening Systems provider,  Kinesio Taping Practitioner®. She is trained in neuro-developmental techniques for the adult and pediatric populations, reflex integration, and also heavily trained in Cranial Sacral Therapy. She was the South Carolina Occupational Therapy Association President (2018-2020). She has passions in reflex integration, praxis, visual deficits, craniosacral therapy, and neuro-rehabilitation. She loves living in South Carolina with her husband, son, and dog.

- Presenter Disclosure: Financial: Presenters have received an honorarium for presenting this course. Non-financial: Presenters have no relevant non-financial relationships to disclose.

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# Learning Outcomes

- Participants will be able to identify at least 5 different standardized tests/protocols for the evaluation and assessment of the child with ASD, for application for both the OT and PT.
- Participants will be able to recognize baseline goals for the child with ASD, for application for both the OT and PT.
- Participants will be able to identify at least 3 frontline treatment interventions for whole body coordination and motor learning.

- Participants will be able to identify and implement at least 3 advanced treatment interventions for progression of praxis.
- Participants will be able to identify the impact of motor learning through direct observation of intervention techniques and documentation examples.

# Checking In…

# General outcomes of testing

- Children with ASD **received lower scores** on multiple standardized tests of basic motor performance compared to typically developing children as well as children with other developmental diagnoses.
- Children with ASD demonstrated both spatial (incorrect body positioning, body-part-for-tool errors) and temporal (poor movement timing, increased time to initiate movement) errors during imitation/praxis tasks.

# General Expectation of Testing

- Recall back to ICF model and motor learning theories
  - What is the intent of the test?
  - What is YOUR intent for the test?
    - Insurance recommendations
    - Parental input and relevancy
  - Criterion referenced – pre and post test format
  - Norm referenced – referenced to age, standard score

# Standardized Testing

- This is NOT a comprehensive list or recommendation.
- Reference by APTA:
  - https://pediatricapta.org/includes/fact-sheets/pdfs/15%20Selected%20Assess%20Tools%20for%20ASD.pdf

# BOT-2

- BOT-2 is a reliable and valid measure of fine and gross motor performance in individuals between 4 and 21 years of age.
- 8 subtests: Running Speed and Agility, Balance, Bilateral Coordination, Strength, Upper Limb Coordination, Response Speed, Visual Motor Control, and Upper Limb Speed and Dexterity
  - 30 items in gross motor and upper limb coordination
- Use of this test may be best suited for children with ASD who function at the higher end of the spectrum.
- Children with ASD also demonstrate dyspraxia, i.e. impaired performance of skilled motor gestures during imitation, on verbal command, and during tool use, that cannot be wholly explained by basic perceptuo-motor deficits.

### Subtest Scores

| Measure | Raw | Scaled Score | Comments |
|---|---|---|---|
| **Bilateral Coordination** | 19 | 7 | BELOW AVERAGE |
| **Balance** | 26 | 11 | LOW END of AVERAGE |
| **Running Speed & Agility** | 27 | 15 | AVERAGE |
| **Strength (Knee Push Ups)** | 15 | 13 | AVERAGE |

### Composite Scores

| Measure | Raw | Standard Score | Percentile | Comments |
|---|---|---|---|---|
| **Body Coordination** | 18 | 36 | 8% | BELOW AVERAGE |
| **Strength and Agility** | 28 | 46 | 35% | AVERAGE |

### Notes

Semaj participated well in today's standardized testing. He presents with a history of variable behavior and tolerance for directed, nonpreferred physical activities, especially when perceived as challenging. He was able to engage in activities today with provision of significant, preferred rewards. Results may be considered accurate and valid to patient's true physical ability, however it is still of note patient does not engage regularly in physical activity outside of preferred sport play (soccer, primarily.)

At time of last reassessment, Semaj was unable to be included in the BOT-2. He was tested using the PDMS-2, however age-equivalence was determined due to patient's age above the testing protocol.

Within the BOT-2, Semaj demonstrates BELOW AVERAGE Bilateral Coordination, as most noted with inability to complete contralateral movement patterns, despite visual and tactile cues. Semaj presents within the LOW END of AVERAGE for Balance skills, as noted by limited balance progression in any periods of removal of visual cues or progression to uneven surfaces. Semaj demonstrates AVERAGE Running Speed & Agility, and AVERAGE Strength. Running Speed & Agility is limited specifically when agility exercises require a level of bilateral coordination. Strength is specifically limited within core exercises, including limited sit-ups and trunk extension.

# Pediatric Evaluation of Disability Index (PEDI)

- Measures capability and performance of functional activities in Daily Activities, Mobility, Social/ Cognitive, and Responsibility dimensions of participation.
- Ages 1 to 21 years
- Norm-referenced and criterion-referenced

## Pediatric Evaluation of Disability Inventory (PEDI)

Assess key functional capabilities and performance in children ages six months to seven years. Measure both capability and performance by observing self-care, mobility, and social function.

### Notes

[redacted] participated well in the standardized assessment of his Functional Skills: Mobility Domain and Caregiver Assistance: Mobility as determined by this physical therapist and in report from caregiver. A scaled score was obtained due to patient's age of 17 years old. Results may be considered precise to patient's current level of performance [redacted]

[redacted] scores respectively in the preceding manner for mobility skills, with a raw score of 49 (scaled score 61.2, standard error 1.6) with increasing difficulty from 0-100. This scaled score indicates delayed functional mobility. Caregiver assistance indicated increased burden of care and extensive modifications required for bathing (in physical transfers per mobility) and rehab modifications needed for outdoor and stair locomotion.

At [redacted] age, [redacted] demonstrates SIGNIFICANTLY BELOW AGE-ANTICIPATED MOBILITY. [redacted] requires maximal to dependent physical assistance for shower/tub transfers. Due to significant fall risk [redacted] outdoor locomotion is carefully monitored and modified to limit uneven terrains or incline. [redacted] has been progressing to climb stairs effectively, with close supervision, and use of handrails. [redacted] does not carry fragile or large objects in bilateral hands.

## Children's Assessment of Participation and Enjoyment/ Preference for Activities of Children (CAPE/PAC)

- Ages 6 to 21 years
- Provides information on 6 aspects of recreational participation.
- Focus on Life Participation, Quality of Life, Social Relationships, Patient Satisfaction.
- Child uses visuals and visual rating scales in self-reported questionnaire.

# Test of Gross Motor Development, Second Edition (TGMD-2)

- Ages 3 to 10 years
- Locomotor and Object Control subtests
- 12 test items
- Norm- and criterion- referenced
- Test includes skills typically practiced during play or in physical education classes.
- Visuals from the manuals are helpful for children with ASD.
- Quality of movement and activity skills.
- Test identifies children who are significantly behind their peers in gross motor development.

## Miller Function and Participation Scale (M-FUN)

- Ages 4 to 7.11 years (17 skills)
- Ages 2.6–to 3.11 years (15 skills)
- Visual motor, fine motor, and gross motor skill assessment
- Participation assessment: home and classroom checklists
- The behaviors are rated using an easy- to-use 5-point scale from “almost always successful” to “not observed.”
- Looks at motor skills for games and play in context.

# Movement Assessment Battery for Children (Movement ABC- 2)

- Ages 3 to 16 years (3 age bands checklist)
- Includes manual dexterity, aiming and catching, and balance subtests
- Non-motor factors affecting movement are considered
- Test includes simple tasks taken out of game or play context.
- Norm-referenced
- Easier to administer with children with short attention span than other traditional motor skill battery.

# Sensory Integration & Praxis Test (SIPT)

- SIPT is a comprehensive assessment tool for evaluating praxis and sensory integration in children between 4 and 8.11 years of age ( Ayres, 1988)
- Norm- referenced
- Bilateral motor coordination subtest of the SIPT (SIPT-BMC);
  - 22 action sequences involving either the upper limbs or the lower limbs. O
  - Out of these 22 action sequences, 14 UE actions; 8 LE actions.
- While impairments in basic gross and fine motor skills are also found in children with other developmental disorders including children with Attention Deficit Hyperactivity Disorder and Developmental Coordination Disorder, impairments in praxis seem to be specific to autism.

# Other tests

- Preschool imitation and praxis scale
- Emerging test- the Test of Ideational Praxis
- Assessment of Imitation
- Motor Planning Maze Assessment
  - http://tmbeducationalenterprises.com/assessments.htm
- School Function Assessment
- Mullen Scales of Early Learning
  - The MSEL was the most frequently identified assessment of motor skills in children with ASD and genetic conditions associated with ASD.

# Skilled Observations

- Reflex Testing

# Goal development

- What is your goal?
- What are the patient's goals?
- What are the parent's goals?
- Activity, Impairment, Participation
- Functional capacity
- Family motivation/involvement
- What is your "discharge" goal?

# PT: Long Term Examples

- Pt. will demonstrate improved efficiency and ability to motor plan and follow directions for participation in appropriate standardized testing for gross motor performance as determined by physical therapist.
- Pt. will demonstrate improved overall strength for independent demonstration of proper posture during functional skills.
- Pt. will participate in progressive age-anticipated recreational activities, indicating overall improved coordination, motor planning, safety awareness, strength and endurance.
- Pt. will improve his overall mobility as noted with increased independence reported in the home during mobility and activities of daily living without loss of balance, increased dependence on caregiver or reported excessive fatigue.

# PT: Endurance PARTICIPATION based

- Pt. will independently run for 5 consecutive laps (100 ft.) without request to stop or reversion to walk, indicating improved physical endurance.
- Pt. will tolerate consistent physical exercise for >40 minutes without a significant rest break (>3 minutes) as observed by physical therapist.
- Pt. will carry personal items (such as backpack, lunch box, grocery bags etc.) within typical home/community interaction without manual help from parent or therapist >75% of the time requested.

# PT: Motor Learning ACTIVITY based

- Pt. will perform modified hopscotch with true feet together-feet apart patterning independently (without any verbal cueing or visual demonstration required.)
- Pt. will independently bounce pass a tennis ball to peer and subsequently catch for 10/10x.

# PT: Motor learning PARTICIPATION based

- Pt. will independently participate in hand-eye coordinated physically directed activity, such as badminton, ping pong, t-ball.
- Pt. will participate in foot-eye coordinated recreational activity, such as soccer, hopscotch, jump rope, with supervision.
- Pt. will independently and immediately perform whole body coordination task (such as jumping rope, skipping, galloping, jump strides) >75% of the time indicating improved integration of gross motor strength and planning as age-appropriate.

# PT: Motor learning PARTICIPATION based

- Pt. will independently dribble a basketball while walking for 150ft to address hand-eye coordination and dual task processing for introduction in team/community play.
- Pt. will climb age-typical playground equipment, including rock wall, ladder, slide etc., without requests to stop or inability to perform due to strength or coordination deficits, supervision only.
- Pt. will play in active physical recreational game (including but not limited to basketball or soccer) with peer for 15 minutes with supervision only.
- Pt. will independently demonstrate ability to perform novel dance/ movement sequence for >2 minutes.

# PT: Modified Motor Learning FUNCTIONAL PARTICIPATION based

- Pt. will step over 2 consecutive hurdles placed at approximately 7+ inches without loss of balance or foot drag, supervision only.
- Pt. will climb playground ladder and/or rock wall with reciprocal UE/LE movement patterns, supervision only.
- Pt. will demonstrate reciprocal ball play with peer with catch and target intention with toss >50% of the time.
- Pt. will follow and participate in a 2-3 step gross motor obstacle course with supervision >50% of the trials.
- Pt. will ascend 4+ standard stairs with use of 1-2 HR, in upright posture (without reversion to crawl) with >75% of the time observed.

# OT: Long Term Goal Examples

- Pt. will motor sequence and organize through spatial tasks (i.e., folding and putting away mats, organizing clean up, etc.) with SBA (10% or less cuing).
- Pt. will perform handwashing skills with SBA (10% or less cuing).
- Pt. will improve in body scheme and awareness by correctly adjusting clothing with minimal cuing.
- Pt. will improve in body schema and awareness to tolerate vestibular/unstable surface play on the playground with peers, 80%x

# OT: Bilateral coordination

- Pt. will transfer an object from his left hand to his right hand during play activities with verbal cues 50% of the time
- Pt. will perform dual processing bilateral hand coordination activities with minimal assistance for coordination to improve shoe tying
- Pt. will doff socks using bilateral hand skills with SBA- cuing only.
- Pt. will improve in bilateral and crossing midline skills to don shirt with SBA (cuing only).
- Pt. will string large wooden beads on a wooden stick independently 3/4x for bilateral hand skills during a typical play activity.
- Pt. will roll play doh between hands independently to improve bilateral hand skills with functional play tasks.

# OT: Play

- Pt. demonstrate at least 6 affordances independently with a novel toy to improve body awareness and cause-effect for body/environment interactions
- Pt. will demonstrate the ability to persist with a functional or play activity for 5 minutes without redirection.
- Pt. will demonstrate an increase in sensory organization, praxis, and emotional growth as demonstrated by his ability to play appropriately with toys (no throwing) 100% of attempts in session
- Pt. will demonstrate the ability to problem solve through therapist designed playful obstructions 20/20 attempts in session
- Pt. will motor plan through a physically engaging task (ex: noodle sword fight, rough house, etc.) with minimal assistance for motor planning.

# OT: Social and coordination

- Pt. will visually reference therapist with eye contact in interactive play 90% of attempts in session when appropriate.
- Pt. will correctly imitate therapist movements and appropriate response to stop or change when the  ”Simon Says" verbal cue is initiated 5/5x -- break this goal down

# OT: Reflex and participation based

- Pt. will improve in ATNR reflex integration by performing ATNR coordination ax's with min prompting also to improve eye-head dissociation (writing) and catching ball ax's.
- Pt. will improve in eye-head dissociation to catch a ball by rolling (side lying) point A to point B independently.
- Pt. will string large wooden beads on a wooden stick independently 3/4x for bilateral hand skills during a typical play activity.
- Pt. will roll play doh between hands independently to improve bilateral hand skills with functional play tasks.
- Pt. will army crawl using flexion/extension patterns of all 4 limbs independently to improve in whole body coordination to keep up with his peers during recess

# OT: Other

- Pt. will maintain an upright posture while performing motivating task at a table with or without supportive seating
- Pt. will catch a small ball without trapping 8/10x to improve in eye-hand coordination.
- Pt. will perform interactive metronome tasks to improve in overall neural timing and sequencing required in functional bilateral hand coordination tasks:
  - As demonstrated by their ability to speed up and slow down from the beat independently
  - Achieve a task average under 55 ms away from the beat without guide sounds

# General outcomes of Intervention

- Primary goal of ASD intervention is improving child outcomes, but child-focused ASD interventions also impact parents.
  - Parent education/engagement
  - Parental stress and psychological well-being
- Current early intervention services include:
  - Early intensive behavioral intervention/ Applied behavioral analysis
  - Parent-implemented intervention
  - Publicly-funded intervention (0-3 programming)
- Those that incorporate naturalistic and developmental principles are considered the most successful approaches for improving outcomes for young children with ASD.

# Impact of Intervention programming

- Considerable evidence has shown that physical exercise could be an effective treatment in reducing stereotypical ASD behaviors in children.
- 88% of children with ASD demonstrate stereotypy behaviors (i.e. hand-flapping)
- Exercise with moderate to vigorous intensity level was demonstrated to be more effective than low intensity level in decreasing the number of occurrences of the stereotypic behavior.

# Impact of Intervention programming

- Individuals with ASD may *differentially rely on proprioceptive information relative to visual information* during standing balance and other motor activities.
- Emphasize the link between visual input and the activity.
  - Think back to praxis.

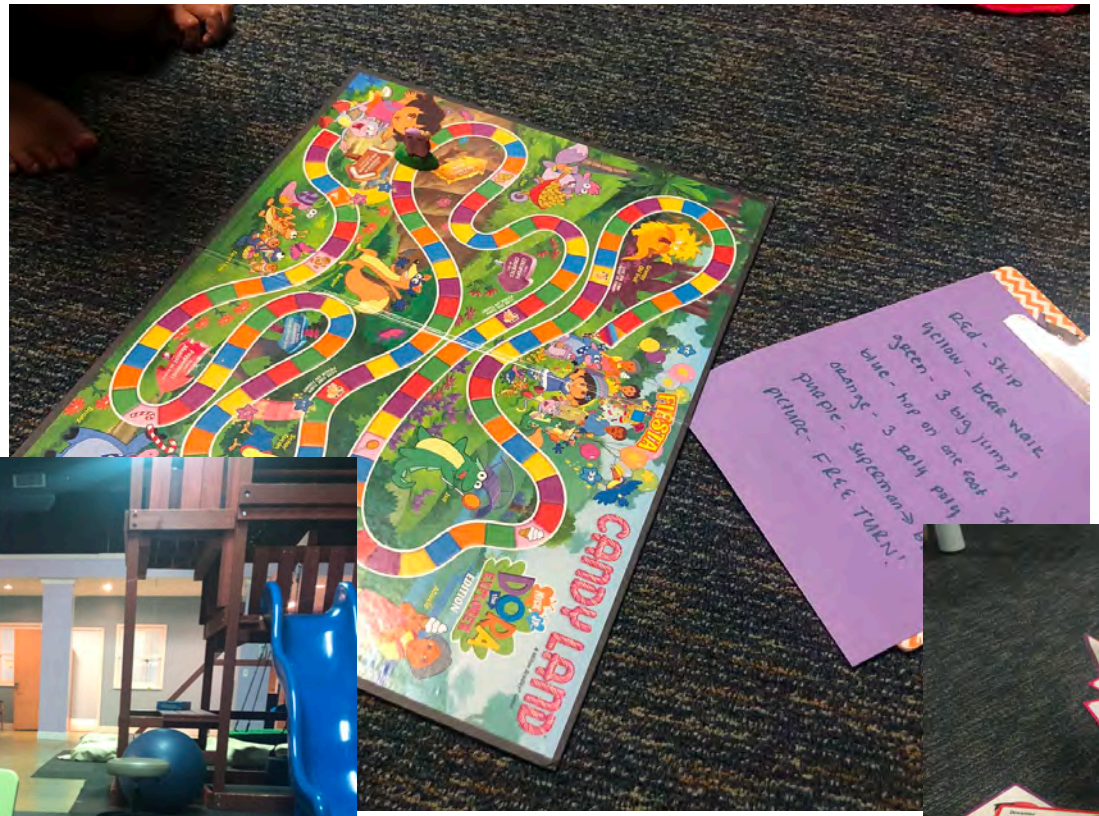
# Whole Body Coordination

- **Get the body moving! Warm-up the body!**
- Climbing jungle gyms/playground (slides, rock walls, ladders)
- Animal walks
- Bicycle/tricycle/scooter board
- Reflex integration
  - Rolling, crawling in quadruped (tunnels)

- Remember how she displayed the STNR

# Motor Learning

- Dynamic video game play
- Obstacle courses
  - Focus on area of development
- Gross motor game play (Dice, Candyland, Cards, Uno)
- Yoga – (not just for range of motion)
- 2-3 step gross motor recall
- Move your body type games
- Sports “decomposition”
- How to play with gross motor toys


CANDY LAND
Red - skip
Green - 3 big jumps
Blue - hop on one foot
Purple - Superman
Picture - FREE TURN!


Bench

# Young motor coordination

- 2 years old
- Cause and effect
- Adaptive behavior
- Social skills

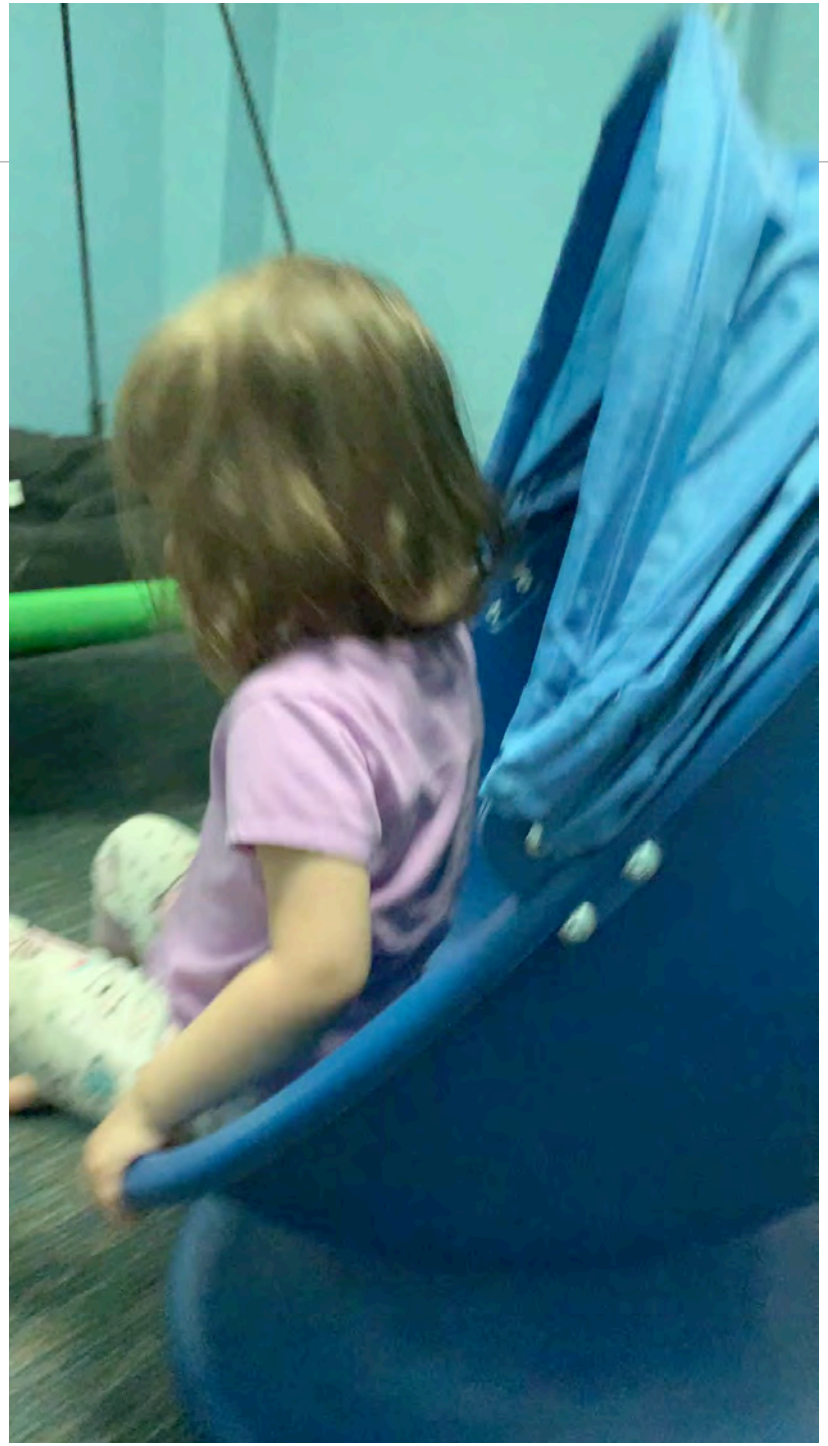
# Young motor coordination

# What did you notice?

- Object affordances
- Vestibular
- Adaptive behavior
- Social
- Body coordination

# Playful obstructions

Starts to go the other direction and use her body a little differently



# Playful obstructions

# Observations

- Why was that playful?
  - Was pushing the bin just beforehand
  - Tactile
  - More
- What did you notice?
  - Different use of body, climbing over,
  - Eye contact
  - No fussing (used to do this all the time)

# Session note

- Session focused on adaptive behavior, playful obstructions, cause and effect, body awareness, and body schema through performing the following:
- 1. Pushing in a bin and waiting for eye contact for go for interpersonal skills, motor coordination for getting out and eye contact. Utilized her legs to abduct and climb out instead of moving in a linear/forward fashion as she frequently does.
- 2. Egg chair with peek a boo opening and closing the flat- pt. able to independently lift cover. Also explored with spinning in the chair in 1 direction, then pt. started going in a different direction independently with moving her feet differently.
- 3. Knocking over blocks- less interested, but did this to get through a playful obstruction
- 4. Imitating play with rolling on mat
- 5. Cause and effect, eye contact, adaptive behavior, and social skills- stuck feet out 80%x independently on swing for mom to push pt. against her feet
- Continued walking on knees around room for swimming and without direction, approx. 30% of session requiring physical re-engagement with parent, OT, or toys. In 4 instances pt. redirected herself to a toy or equipment independently.

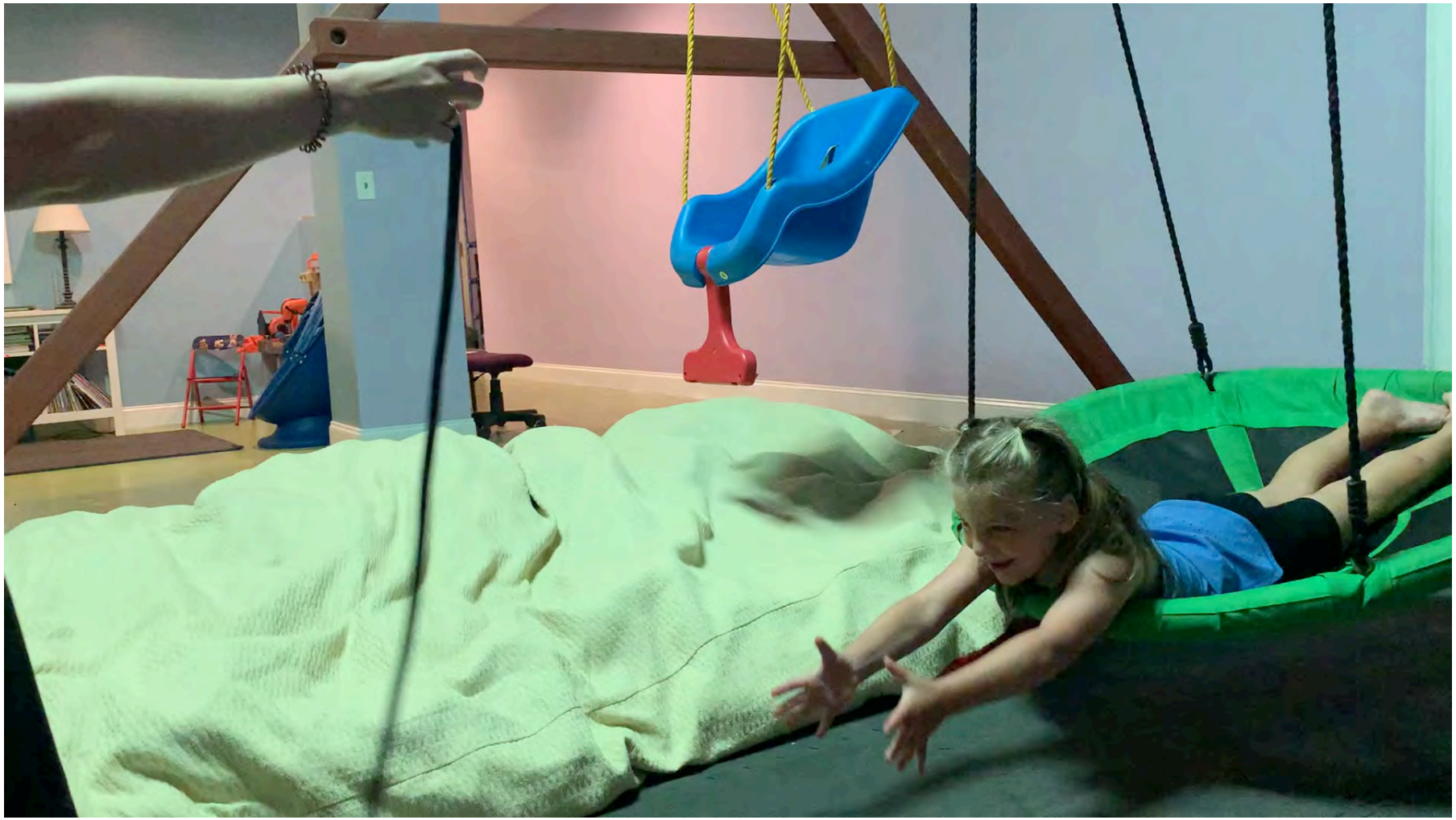
# Neural Timing and Sequencing

# Neural Timing and Sequencing

- Treatment progression
- Where to start?
  - With or without guide sounds?

- B hands, B feet (toes, heels)
- More advanced– infinity sign, arrows, bouncing ball, rotation (visual fixation), with peers

# Neural Timing and Sequencing



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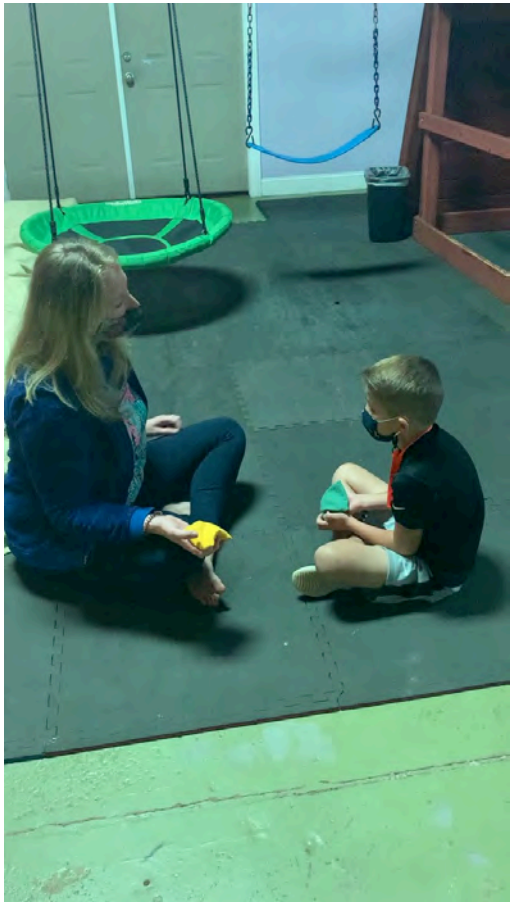
# Dual Processing, Neural Timing, Sequencing, Bilateral Coordination

# Dual Processing, Neural Timing, Sequencing, Bilateral Coordination

# Dual Processing, Neural Timing, Sequencing, Bilateral Coordination



# Dual Processing, Neural Timing, Sequencing, Bilateral Coordination

- Treatment progression for 5+ years.
  - 1 bag rectangle and 1 bag oval, followed by 2 bag rectangle
  - 1 bag rectangle and 2 bag rectangle with feet (2 minutes before moving on)
  - 2 bag oval with good rhythm and feet
  - 1 ball bounce
  - 1 ball V
  - 2 ball bounce
  - 2 ball puppet (great organizing skill!)
  - Partner 1 ball rectangle, 1 ball oval
  - Partner 2 ball rectangle, 2 ball oval

# Treatment Progression

A

B

# Treatment Progression

A

B

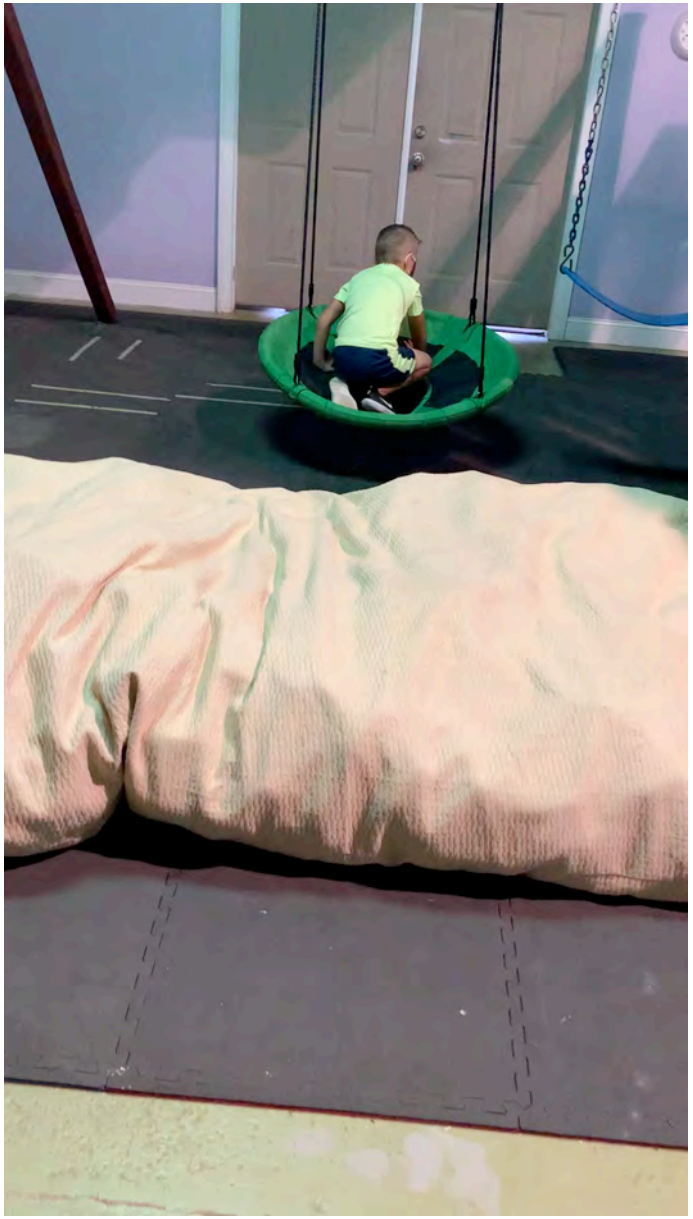
# Treatment Progression

CONTINUED

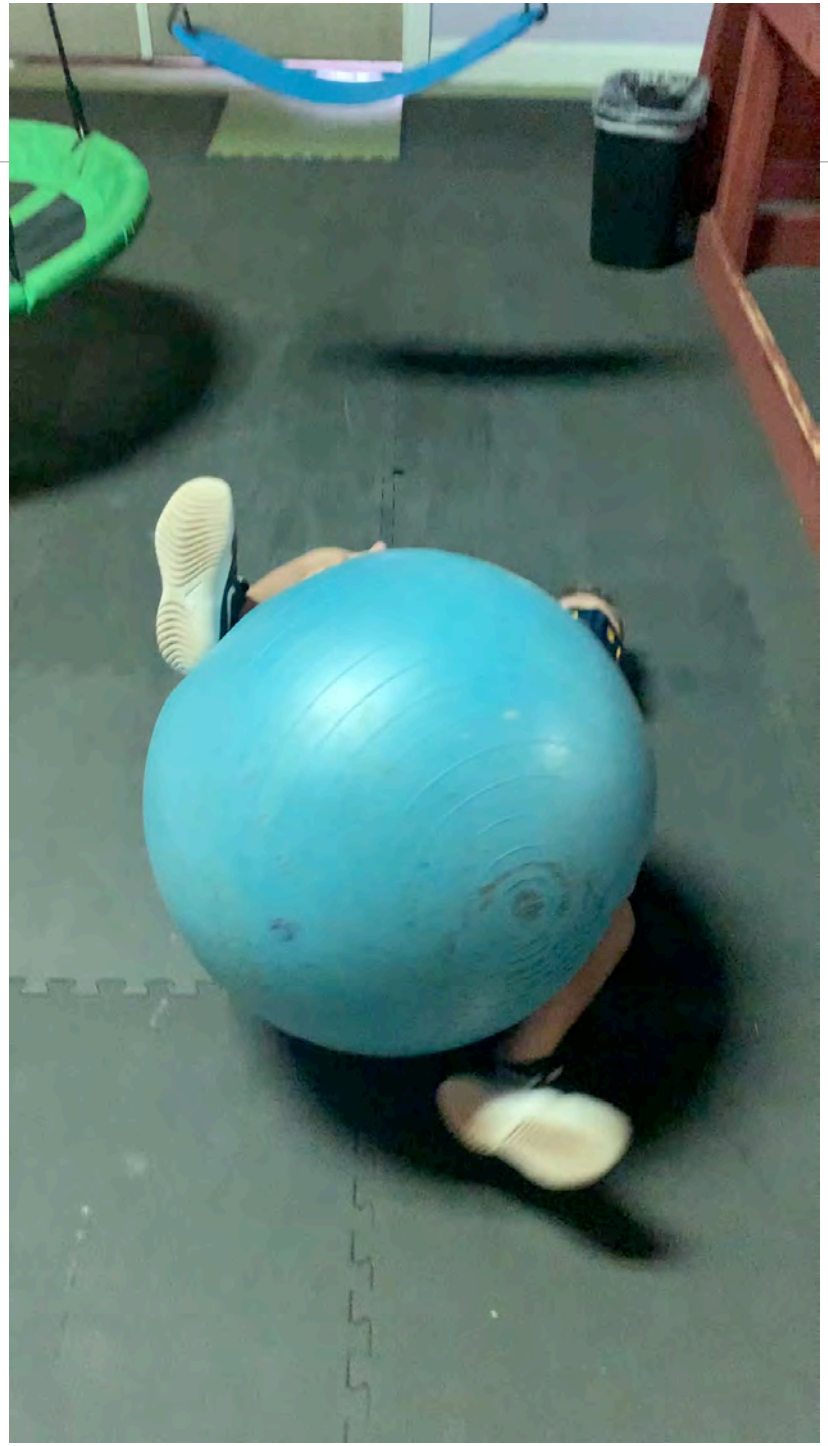
# Treatment Progression

# Dual Processing, Neural Timing, Sequencing, Bilateral Coordination

- High level praxis



# Eye-hand/ body coordination



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# Eye-hand/ body coordination

# Catching a ball prep

# Catching a ball

- Look how far he has come!

# Praxis

# Documentation Examples

- Focus on assessment
  - Why is this important for PT or OT?
- Participation: peer inclusion
- HEP: community involvement

continued

PT

| | |
|---|---|
| Obstacle Course | Facilitated including hopscotch and climb slide. Anticipated movement patterns in hopscotch varied per round. Verbal cues to perform in spontaneous ways, and perform in different frequencies. Pt able to adapt with mild delay for visual, auditory and physical processing. |
| Ball Skills | Facilitated with progression of ball handling, for effective bounce pass, catch with hands only, toss to target. Advanced motor planning to include dual processing demand for counting and alphabet to improve self initiated timing and sequencing. |

**Goals: Gross Motor Skills**

| Description | Data | Start Date |
|---|---|---|
| Long-Term: Gracie will demonstrate improved age-appropriate locomotor skills addressing motor planning, strength, and bilateral coordination deficits. | Yes | 03/02/2017 |
| Short-Term: Gracie will independently and immediately perform whole body coordination task (such as jumping rope, skipping, galloping, jump strides) >75% of the time indicating improved integration of gross motor strength and planning as age-appropriate. | 85% | 01/08/2018 |

**Goals: Home Exercise Program**

| Description | Data | Start Date |
|---|---|---|
| Long-Term: Gracie's family will be independent and consistent with comprehensive home exercise program. | Yes | 03/02/2017 |
| Short-Term: Gracie's family will verbalize a good understanding on gross motor and other functional mobility, strengthening, balance, coordination, and physical endurance activities for inclusion in comprehensive home exercise program. | Yes | 03/02/2017 |

**Objective and Goal Notes**

Gracie was present for 60 min PT session.

## Assessment

Gracie participated well in today's session. She did very well with verbal cues to progress ball handling interaction. By the end of the task, she was able to visually follow ball for more effective handling and include cognitive dual processing demand. This is indicative of improving body awareness, timing and sequencing for possible inclusion in peer directed community activities.

## Plan

# PT Notes

## Objective

### Activities / Exercises Performed

| Name | Notes |
|---|---|
| Basketball Activity | Facilitated with therapist and sibling with emphasis on self regulation and body awareness to grade level of physical aggression. |
| Wii | Facilitated with inclusion of WiFit for dynamic game inclusion. Focus on patient spontaneous understanding on novel games, with ability to coordinate, regulate and motor plan from learning responses to participate. Requires intermittent verbal and visual cues to adjust self for balance weightshifts. |

Semaj participated well within this session. He transitioned in with higher sensory seeking behavior and hyperactivity, however he responded well to inclusion in game play without sensory preparation. Previously he would have been unable to down regulate for game play, and become overly physically aggressive, with inability to sustain participation. He was able to follow guidance from therapist today to refine his body movements for novel game play, indicating improved body awareness, strength and motor planning.

# OT Notes

- Only listing components related to motor coordination and further impact

| | |
|---|---|
| Reflex integration | --Supine rhythmic movements with min activation of head demonstrating improved brainstem integration. Emotional response followed by brain buttons with good effectiveness to calm. Max-dep assist for brain hookups to cross feet in front of each other.<br>--TLR isometric ax's performed with max assist for lateral neck flexion, however able to generally follow directions for chin up and down.<br>--ATNR with balloon/ball toss with peer while crawling. SBA reaching R over L, but max assist required to gently block L so pt could hit L over R. Therapist kept with slow, rhythmic song or humming and tactile cues only for pt to motor plan instead of vc's. |
| Bilateral Hand Skills | cutting with R hand, stabilizing with L. MIN facilitation to keep R elbow down by side. STNR present and preventing full fluid movement due to neurological pattern of chin tuck. |
| Reflex integration | ATNR - army crawling independent. Moro- MIN assist to "starfish" out. |

# OT Notes continued

| | |
|---|---|
| Motor Praxis | With vestibular inputs in climbing on swings with mod assist- great difficulties with timing, rhythm, and body awareness/schema.<br>Also performed with different wayts to interact with piano- 9 affordances given, all of them using his body in a gross motor way. |

| | |
|---|---|
| Interactive Metronome | Max A to clap on beat; HOH A provided for 50% of ax; TA 180; POOR auditory processing and bilateral motor coordination, clapping to metronome beat too early or too late; however persisted well during ax with no requests to end ax |
| ADL/Shoes | Using shoe tying board; able to tie initial knot independently; max A to complete subsequent steps |

# OT Notes Continued

| | |
|---|---|
| Functional Endurance | Functional play with high level basketball ax with peer- independent to address contact play in using his body appropriately to block (not avoiding and not being too forceful), peer play, and sequencing his body. |
| Motor Praxis | Pt has a hard time trusting his body especially if it involves contact with others and also vestibular inputs. However, this date noted pt independently exploring climbing on playground, although stopped when it came to a transition. Also engaged with trapeze swing and willing to try new positions, without pressure from OT. Easily over-aroused on swing losing body control with poor ability to understand what his body was doing. |

# Discussion of other interventions

- Imitation
- Cause/effect play
- START SUCCESSFUL
- Social play
- Shoe tying/dressing sequences

# References

- As separate pdf supplied with course materials

# Questions?


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