A photograph of a woman with dark curly hair, wearing a white turtleneck and a green shawl, kissing a young child on the cheek. The child is smiling broadly and wearing a dark jacket. The background is a soft-focus green field.

Sensory Processing and Self-Regulation: Supporting Infants' and Young Children's Relationships with People and the Environment

Presenters:

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Visit our Website

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NYC Early Childhood Mental Health TTAC Training and Technical Assistance Center

TTAC is funded by the New York City Department of Health and Mental Hygiene through [ThriveNYC](#).

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Events

Thursday, April 2, 2020
TTAC Webinar: Supporting Families and Caregivers of Infants and Young Children Affected by the COVID-19 Pandemic

Wednesday, May 20, 2020
Beginning at the Beginning: The Foundational Elements of Early Childhood Mental Health Consultation – Part I

Friday, May 29, 2020
Beginning at the Beginning: The Foundational Elements of Early Childhood Mental Health Consultation – Part II

Thursday, June 4, 2020
Beginning at the Beginning: Early Childhood Mental Health Consultation in Infant & Toddler Care - Part III

Wednesday, June 10, 2020
TTAC Webinar: The Loss and Grief of COVID-19: Real Challenges and Practical Suggestions

Friday, June 12, 2020
TTAC Webinar: Reducing Bias during COVID-19 using the Crawford Bias Reduction Theory & Training

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NYC DOHMH Bureau of Early Intervention E-Learning Modules



Foundations of Social-Emotional Development in Infants and Toddlers
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NYC Early Childhood Mental Health Network COVID-19 Resource Guidance



Self-care resources for child serving professionals and resources to inform your work with children and families.
[Learn More](#)

The Early Childhood Mental Health Network



Get to know the Early Childhood Therapeutic Centers (ECTCs)! Available in both English and Spanish.
[Learn More](#)

Who We Are

The New York City Early Childhood Mental Health Training and Technical Assistance Center (TTAC), is funded through ThriveNYC, in partnership with the NYC Department of Health and Mental Hygiene (DOHMH)

TTAC is a partnership between the New York Center for Child Development (NYCCD) and the McSilver Institute on Poverty Policy and Research

- **New York Center for Child Development** has been a major provider of early childhood mental health services in New York with expertise in informing policy and supporting the field of Early Childhood Mental Health through training and direct practice
- **NYU McSilver Institute for Poverty Policy and Research** houses the Community and the Managed Care Technical Assistance Centers (CTAC/MCTAC), which offer clinic, business, and system transformation supports statewide to all behavioral healthcare providers

TTAC is tasked with building the capacity and competencies of mental health and early childhood professionals through ongoing training and technical assistance

<http://www.TTACny.org>



Why is Sensory Processing Important?

Sensation is the raw material which mediates the formation of our earliest relationships. It is key to the development of self-regulation of arousal states, attention, emotion, and behavior, and central to the construction of knowledge. All of these are core components of mental health in infancy and early childhood.

What is Sensory Processing (Integration)?

- Each individual's ability to detect, receive, register, **combine**, discriminate and respond to sensory information from our world and from within* our own bodies:
 - Tactile (touch)
 - Vestibular (gravity, movement, space)
 - Proprioception (muscle & joint sense)*
 - Visual (sight and perception)
 - Auditory (hearing and perception)
 - Gustatory & Olfactory (Taste & Smell)
 - Interoception (internal organs & processes)*
- Individual's profile of sensory preferences, tolerances, and perceptual-motor capacities emerges over time.

Self-Regulation

The child's developing capacity to flexibly modulate and grade reactivity to sensation, affect arousal and behavior; recover from dysregulated states; and sustain levels of adaptive arousal with relative autonomy, in support of goal-directed actions across a broad range of functions.

(Carver & Scheier, 2016; Foley, 2017; Murray, Rosanbalm, Christopoulos, & Hamoudi, 2015)

Contributions of Healthy Sensory Processing to Early Development and Mental Health

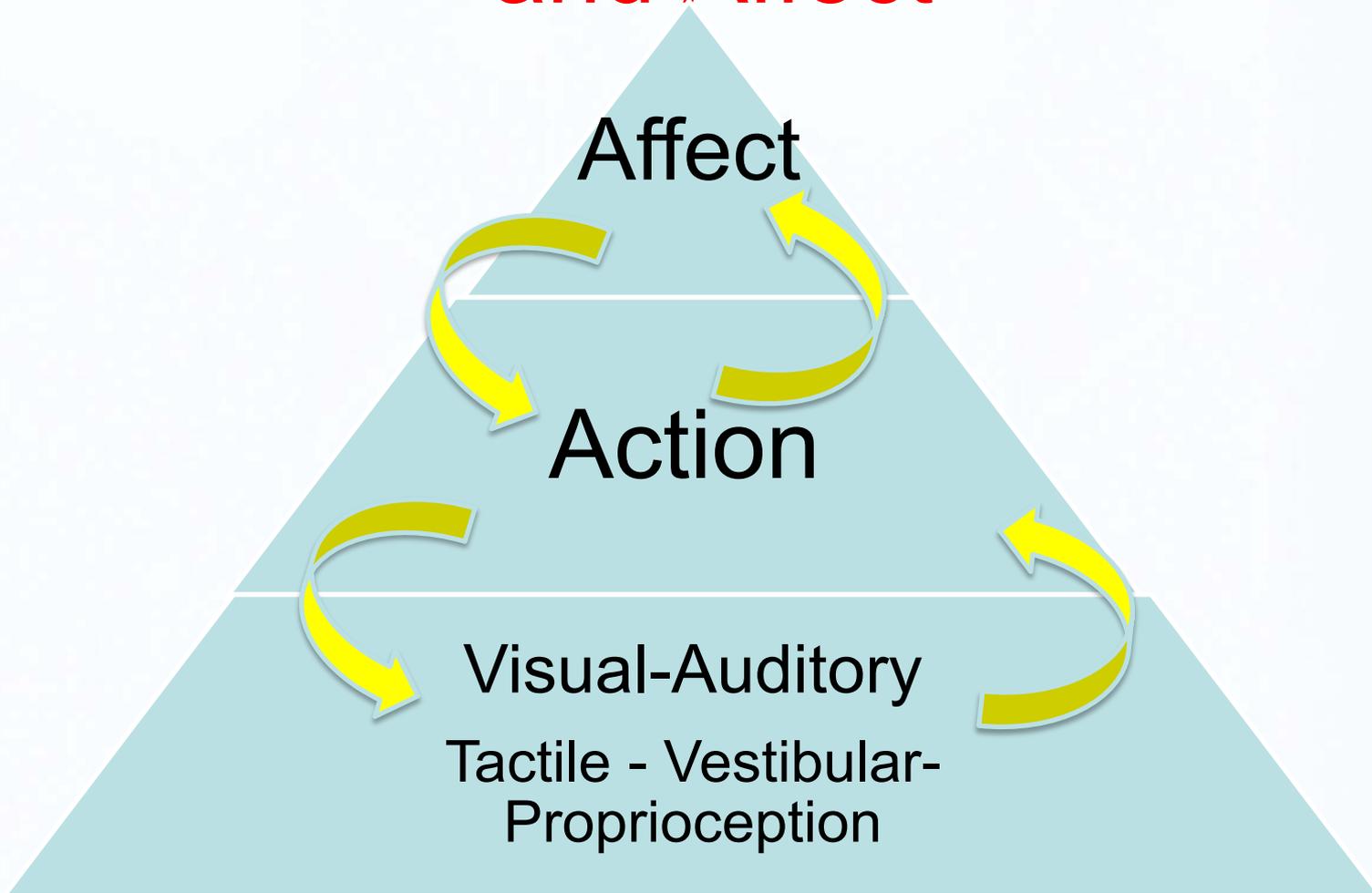
Early Development

- Take in/enable sensory experiences in utero;
- Spur CNS growth, plasticity;
- Early-emerging systems provide foundation for later ones;
- Create internal models of body for orientation in space & motor planning;
- Components of perceptual & cognitive learning;

Early Mental Health Devel.

- Development & organization of parent-child attachment relationship;
- Capacity for self-regulation of states of wakefulness & attention;
- Social relationships & participation;
- Self-concept formation;

Sensory Foundations for Action and Affect



What are Sensory Processing Disorders?

- *Sensory Processing Disorders*: A set of complex dysfunctions at multiple levels of the brain and nervous system in their capacity to detect, register, and integrate information from multiple sensory systems;
- Affects ability to regulate and adapt one's responses to the environment in an appropriate, productive manner.
- Several profiles/patterns have been identified and validated over years of research by A. Jean Ayres, L. J. Miller, W. Dunn, and many others;
- Began with standardized testing and behavioral/clinical observations; being validated now via neuroimaging & neurophysiological research.
- Not just about “sensory”; there are 2 motor disorders also.

“Red Flags” of Possible Presence of SPD’s

Infants 0-2yrs

- Chronic unresolved colic; general irritability;
- Rocky state transitions; difficult to soothe;
- Sleep issues;
- Failure to orient to novel stimuli;
- Gaze aversion; poor eye contact;
- Doesn’t want to be held; Seems most content when left alone;
- Unexplainable fearfulness of every-day experiences

Toddlers/Preschoolers 3-5 yrs

- 0-2 yr problems continue;
- Sleeping, eating disturbances;
- Oral-sensory/oral-motor problems;
- Repetitive, stereotypical, non-purposeful play patterns;
- Unable to motor plan simple sequences involving common objects and affordances (e.g. prep. to sit in chair, creep downstairs; mount riding toy);
- Communication issues (verbal and non-verbal);
- Excessive fear or lack of appropriate caution/fear.

Impact of SPD on Early Development and Mental Health of Child and Family

*Sensory Processing Disorders affect **early development** by causing delays by/in:*

- Sensory avoidance limits exploration and sensorimotor learning; Under-responsivity limits inner drive to explore with similar results;
- Acquisition of gross motor milestones and associated skills;
- Development of reach, grasp, and fine motor skills;
- Emergence of typical play and related learning & socialization.

Impact of SPD on Early Development and Mental Health of Child and Family

IMH Consequences:

- Sensory modulation (hypo- or hyper-sensitive) disrupts parent-infant attachment relationship;
- Parent struggles to meet child's needs, own need to feel competent as a nurturer;
- Problems with motivation, self-control; affects interpersonal skills generally;
- Creates friction between not only child-parent, but between parents, other family, extended family;
- Child's sensory-related behaviors trigger parental frustration, "Ghosts in the Nursery" and may lead to trauma.

Occupational Therapy for SPDs: What does it involve? How do I Refer?

- Careful data collection via intake interview & assessment. Development of report & tx plan.
- Begin to resolve sensory modulation issues (sensory hyper- or hypo-sensitivity).
- Work on postural dysfunction (muscle hypotonicity; postural responses and postural organization for equilibrium, balance, functional movement).
- Activities that integrate basic sensory systems (vestibular, proprioception, tactile, visual).
- Activities to address imitation, motor planning, sequencing, motor confidence, symbolic play, socialization—
- Specialized interventions: oral-motor; food aversions; auditory processing intervention; handwriting, etc.
- Referral through Early Intervention program, hospital outpatient, or private therapy practices. Create a database OTs can sign up.

Application of Sensory-Based Strategies within I/ECMH Intervention

- Coach family to identify sensory triggers to dysregulation; how to read child's cues;
- Explore psychological triggers child's dysregulation may evoke;
- Avoiding “knee jerk” reactions; contain child's negative affect vs. anxiety/reactivity;
- Explore “goodness of fit” aspects;
- How to “talk child through”; re-framing problems;
- Support OT environmental mods & strategies, practice in own sessions;
- Use “how is your engine running today” theme to promote child self-awareness;
- Provide sensory materials in playroom or office: bean bag chair; gym mat; lycra fabric; “heavy work” activities can double as anger displacement of aggression.

Application of Sensory-Based Strategies within I/ECMH Intervention (when possible)

- Create spaces in classroom/playroom with close boundaries for quiet play, self-calming; “pup” tent; small tunnel, as well as areas for open, active play.
- Have a wall area with limited visuals;
- Use hula hoops to sit inside during floor times for sense of boundaries; ball chairs or “active motion” stools;
- Basket with fidget toys (for hands and laps)
- Fabrics, curtains, carpet that absorb sound, echoing; or “chair socks/feet”;
- Provide movement breaks; avoid taking away recess as punishment—kid brains need movement to learn! (Vestibular & proprioceptive input);
- 2-kid “see saw”; back-to-back pushes up from floor; wall push-ups; pretend “washing up”, use own hands (good morning wake-up activity).

Questions/Discussion?

Thank you!

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