Pathways to
Professional Development

Building Foundations in Infant
and Early Childhood Mental Health

An Introduction to Sensory Processing, Sensory Processing Disorders and Applications in Infant and Early Childhood Mental Health (IECMH)

Presented by
Susan Stallings-Sahler, Ph.D. , OTR/L, FAOTA
and
Gilbert M. Foley, Ed.D., IMH-E

Pathways to Professional Development: Building Foundations in Infant and Early Childhood Mental Health

Pathways to Professional Development was developed to build workforce competence and to prepare professionals working in the perinatal and birth to 5 periods

- 21 webinars focused on the foundations of Infant and Early Childhood Mental Health.
  - Provided live virtually
  - Recorded for viewing as LMS modules

- Diagnostic Classification of Mental Health And Developmental Disorders of Infancy and Early Childhood (DC:0-5) offered virtually and in-person.

  - View all offerings here→ https://www.ctacny.org/special-initiatives/pathways-to-professional-development/

The aim is to develop a well prepared and competent workforce trained to **identify** and address mental health concerns early, to **promote** awareness of mental health, to **prevent** long-term problems and to **intervene** to help children stay on developmental track.

Pathways to Professional Development
Building Foundations in Infant and Early Childhood Mental Health

NEW YORK STATE Office of Mental Health

NEW YORK CENTER FOR CHILD DEVELOPMENT

ctac
POWERED BY NYU McSILVER

Who we are

These trainings are funded by the New York State Office of Mental Health (OMH) and provided by the New York Center for Child Development (NYCCD) in collaboration with CTAC.

- **New York Center for Child Development** (NYCCD) has been a major provider of early childhood mental health services in New York with a long history of providing system-level expertise to inform policy and support the field of Early Childhood Mental Health through training and direct practice.

- **NYU McSilver Institute for Poverty Policy and Research** houses the Community and Managed Care Technical Assistance Centers (CTAC & MCTAC), Peer TAC, and the Center for Workforce Excellence (CWE). These TA centers offer clinic, business, and system transformation supports statewide to all behavioral healthcare providers across NYS.

    - **NYCCD and McSilver** also run the **NYC Perinatal + Early Childhood Mental Health Training and Technical Assistance Center(TTAC)** which offers ongoing training and technical assistance for those working during the perinatal period to age 5

https://ttacny.org/

Pathways to Professional Development
Building Foundations in Infant and Early Childhood Mental Health

NEW YORK STATE Office of Mental Health

NEW YORK CENTER FOR CHILD DEVELOPMENT

ctac
POWERED BY NYU McSILVER

Overview of the Topic

- This presentation reviews the foundational principles of sensory processing and infant and early childhood mental health.
- The “red flags” for sensory processing disorders (SPD) with implications for development, movement and adaptation will be examined.
- The characteristics and clinical presentation of sensory processing disorders will be discussed through sensory integration, regulatory, and psychological lenses addressing the potential impact SPDs can have on self-regulation, perception, behavior, parent-child relationships and mental health.
- From an applied perspective, this presentation will provide practical environmental modifications to infant and early childhood mental health settings that aim to promote improved goodness-of -fit between the child with sensory processing differences and their environment.
- “Take-away” strategies from a sensory processing perspective applicable to infant and early childhood mental health settings that support self-regulation and relating will be examined.

Pathways to Professional Development
Building Foundations in Infant and Early Childhood Mental Health

NEW YORK STATE Office of Mental Health

NEW YORK CENTER FOR CHILD DEVELOPMENT

ctac
POWERED BY NYU McSILVER

Learning Objectives

1. Define Sensory processing
2. Define Sensory processing disorder (SPD)
3. Describe the main types, characteristics and clinical presentation of sensory processing disorders
4. Identify the three developmental domains that compose the definition of Infant and Early Childhood Mental Health
5. Describe how SPDs impact development, relationships and can contribute to infant and early childhood mental health complications
6. Describe 3 environmental modifications that can be used to create a greater-goodness- of- fit between children with SPD and their environment

Pathways to Professional Development
Building Foundations in Infant and Early Childhood Mental Health

NEW YORK STATE Office of Mental Health

NEW YORK CENTER FOR CHILD DEVELOPMENT

ctac
POWERED BY NYU McSILVER

What is Sensory Processing (Integration)?

Sensory integration is the process by which the brain:

- *Detects*
- *Receives*
- *Organizes*, and
- I*nterprets*

...sensations from **the body** (vestibular, proprioception, touch) and **the environment** (vision, auditory, taste/smell) for functional USE in movement, learning, socialization, and self-regulation.

--A. Jean Ayres, 1972, 1974, 1986; and others

Pathways to Professional Development
Building Foundations in Infant and Early Childhood Mental Health

NEW YORK STATE Office of Mental Health

NEW YORK CENTER FOR CHILD DEVELOPMENT

ctac
POWERED BY NYU McSILVER

Sensory Terms Explained

- **Tactile** (touch/skin)
- **Vestibular** (gravity, movement, spatial awareness)
- **Proprioception** (muscle & joint sense)*
- **Visual** (sight and perception; eye movements)
- **Auditory** (hearing and perception for language & learning)
- **Gustatory & Olfactory** (Taste & Smell)
- **Interoception** (internal organs & processes)

- An individual's profile of sensory preferences, tolerances, and perceptual-motor capacities emerges over time.

Pathways to Professional Development
Building Foundations in Infant and Early Childhood Mental Health

NEW YORK STATE Office of Mental Health

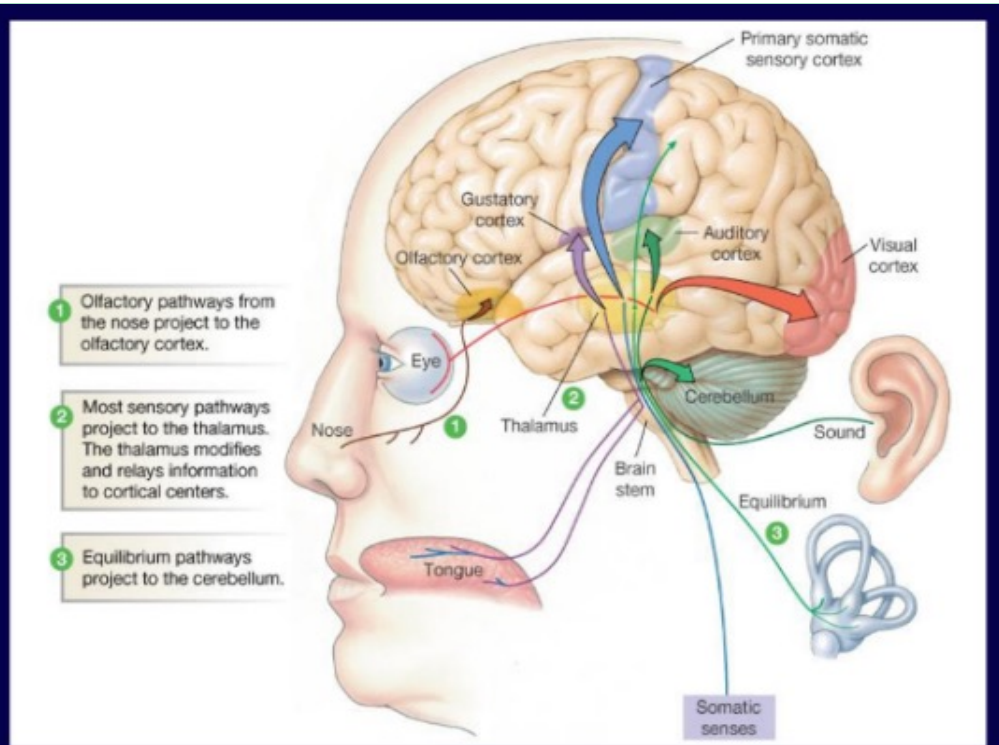
NEW YORK CENTER FOR CHILD DEVELOPMENT

ctac
POWERED BY NYU McSILVER

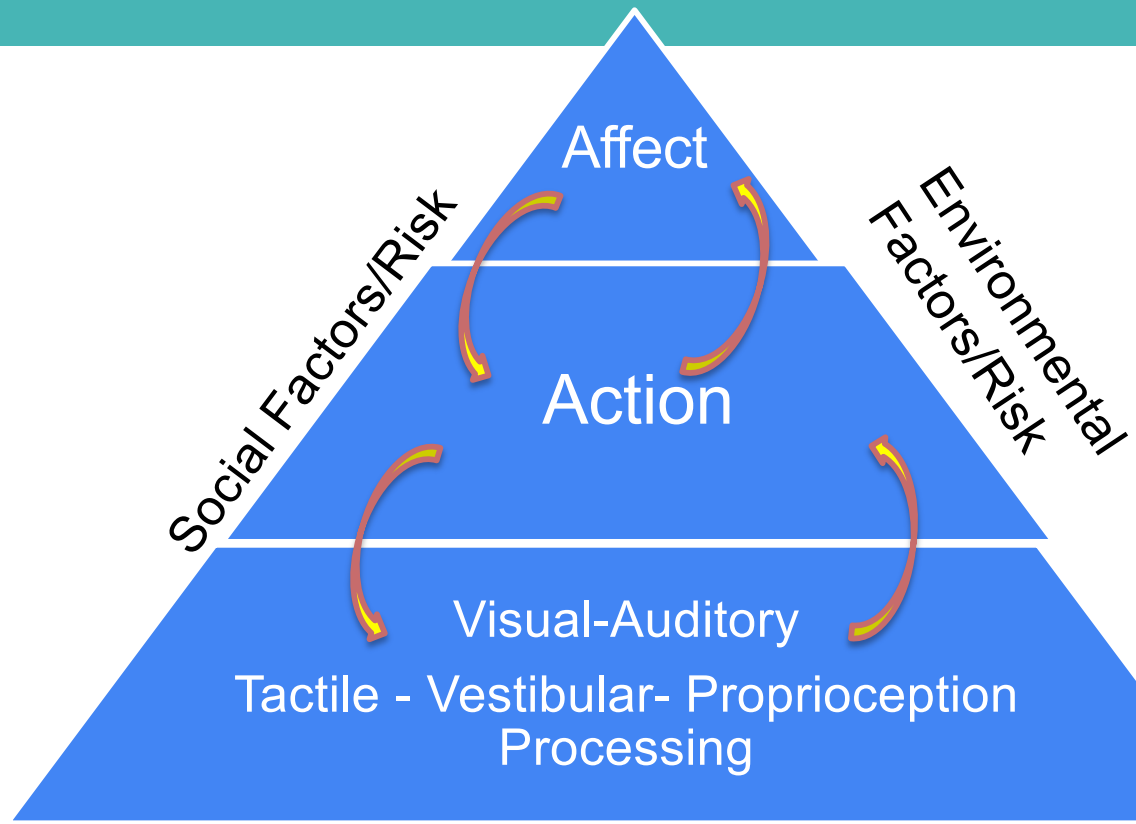
Integration of Sensations

- Vision
- Hearing
- Taste
- Smell
- Equilibrium
- Somatic Senses

Note: Somatic Senses include touch, muscles, & joints



Sensory Foundations for Action and Affect



Pathways to Professional Development
Building Foundations in Infant and Early Childhood Mental Health

NEW YORK STATE Office of Mental Health

NEW YORK CENTER FOR CHILD DEVELOPMENT

ctac
POWERED BY NYU McSILVER

Contributions of Healthy Sensory Processing to Early Development and Mental Health

Early Mental Health Development

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

Early Sensory-Motor Development

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

Pathways to Professional Development
Building Foundations in Infant and Early Childhood Mental Health

NEW YORK STATE Office of Mental Health

NEW YORK CENTER FOR CHILD DEVELOPMENT

ctac
POWERED BY NYU McSILVER

What is Self-Regulation?

The child's developing *neurodevelopmental* capacity to:

- Organize the incoming "flow" of sensations at optimal levels;
- Flexibly *modulate* and grade *reactivity* to sensation, affect, arousal, and behavior (the outgoing, observable 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.

(Dunn, 1999; Carver & Scheier, 2016; Foley, 2017; Murray, Rosanbalm, Christopoulos, & Hamoudi, 2015)

What are 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;
- SPD affects the individual's ability to regulate and adapt one's responses to the environment in an appropriate, productive manner.
- SPDs can present alone, but frequently co-occur with other developmental diagnoses, such as autism, ADHD, or LDs.

Pathways to Professional Development
Building Foundations in Infant and Early Childhood Mental Health

NEW YORK STATE Office of Mental Health

NEW YORK CENTER FOR CHILD DEVELOPMENT

ctac
POWERED BY NYU McSILVER

Sensory Processing Disorder

- Atypical, inappropriate response to sensory input
- Having atypical motor, emotional, attention or adaptive responses after sensory stimulation in one or more channels;
- Only considered a “disorder” when it causes significant difficulties with following daily routines and tasks; social relationships.

(Miller, 2016)

Pathways to Professional Development
Building Foundations in Infant and Early Childhood Mental Health

NEW YORK STATE Office of Mental Health

NEW YORK CENTER FOR CHILD DEVELOPMENT

ctac
POWERED BY NYU McSILVER

What are Sensory Processing Disorders?

- Several profiles/patterns have been identified and validated over years of research by A. Jean Ayres, L. J. Miller, W. Dunn, and others;
- Began with standardized testing and behavioral/clinical observations; being validated now via neuroimaging & neurophysiological research.
- Not just about "sensory". There are 3 main movement disorders also: (1) Dyspraxia/motor planning (2) Bilateral Integration & Sequencing (3) Postural-Ocular

Pathways to Professional Development
Building Foundations in Infant and Early Childhood Mental Health

NEW YORK STATE Office of Mental Health

NEW YORK CENTER FOR CHILD DEVELOPMENT

ctac
POWERED BY NYU McSILVER

How do Sensory Processing Disorders Appear in Infants from Birth to Age 2?

- Chronic unresolved colic; general irritability;
- Rocky state transitions; difficult to soothe;
- Sleep issues; awake more frequently during night;
- 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

How do Sensory Processing Disorders Appear in Toddlers and Preschoolers?

- 0-2 year difficulties with state organization, temperament may continue;
- Little, to no sleep;
- Oral-sensory/oral-motor problems, lead to feeding & speech delays;
- Repetitive, stereotypical, non-purposeful play patterns;

How do Sensory Processing Disorders Appear in Toddlers and Preschoolers?

- 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);
- Child may have problems with motivation, self-control; affects interpersonal skills generally;
- Excessive fear or lack of appropriate caution/fear.

Impact of SPD on Early Development

Sensory Processing Disorders affect ***early development*** *by causing delays such as:*

- *Sensory avoidance:* limits exploration and sensorimotor learning
- *Under-responsivity* limits inner drive to explore; apparent "lack of curiosity"
- *Motor planning problems,* clumsiness (gross motor or fine motor); bilateral incoordination of two body sides.

Pathways to Professional Development
Building Foundations in Infant and Early Childhood Mental Health

NEW YORK STATE Office of Mental Health

NEW YORK CENTER FOR CHILD DEVELOPMENT

ctac
POWERED BY NYU McSILVER

Impact of SPD on Early Development

- All of these patterns can impact:
    - Acquisition of gross motor milestones and associated skills;
    - Development of reach, grasp, and fine motor skills;
    - Emergence of typical play and related learning & socialization;
    - Ability to self-regulate arousal and affect in response to expected routines within social contexts of family, school.
- Not the same across all sensory channels: can have over-response in one system, with under-response in another.

- Examples:

Pathways to Professional Development
Building Foundations in Infant and Early Childhood Mental Health

NEW YORK STATE Office of Mental Health

NEW YORK CENTER FOR CHILD DEVELOPMENT

ctac
POWERED BY NYU McSILVER

SPDs and Behavior

- Children with SPDs receive faulty and distorted sensory information about their bodies and the environment.
- They are apt to interpret and behave in accordance with their perception-of-reality, which is frequently “out-of-synch” with their peers and context.
- Can lead to behaviors and reactions that are confusing to caregivers and teachers, trying to discern their needs and respond meaningfully and successfully.

Pathways to Professional Development
Building Foundations in Infant and Early Childhood Mental Health

NEW YORK STATE Office of Mental Health

NEW YORK CENTER FOR CHILD DEVELOPMENT

ctac
POWERED BY NYU McSILVER

Impact of SPD on Family, Caregivers/Teachers and Attachment

- Sensory modulation (hypo- or hyper-sensitive) can contribute to caregiver confusion in reading and responding to infant cues and make ADLs (activities of daily living) more challenging
- Can disrupt caregiver-infant attachment relationship and undermine feelings of parental competence and satisfaction, even for “good-enough” parents
- Can create friction between not only child-parent, but also between caregivers, other family members, extended family and institutional systems;
- Child’s sensory-related behaviors may trigger re-enactment of caregiver trauma , “Ghosts in the Nursery” (attributions) and may lead to conflict.

Pathways to Professional Development
Building Foundations in Infant and Early Childhood Mental Health

NEW YORK STATE Office of Mental Health

NEW YORK CENTER FOR CHILD DEVELOPMENT

ctac
POWERED BY NYU McSILVER

Can SPDs become “Psychologized”?

- SPDs are a source of added stress and anxiety for the child, trying to control him/herself as well as the surrounding environment.
- SPDs can compromise the “goodness-of-fit” between child and the environment.
- SPDs can trigger a cascade of cumulative adversity.

Pathways to Professional Development
Building Foundations in Infant and Early Childhood Mental Health

NEW YORK STATE Office of Mental Health

NEW YORK CENTER FOR CHILD DEVELOPMENT

ctac
POWERED BY NYU McSILVER

SPDs & Mental Health Disorders

- SPDs have symptom profiles similar to (or co-occurring with) other mental health disorders such as: ADHD, DDAA, Depression, PTSD, so differential diagnosis is important;
- Sensory over-responsiveness correlates with anxiety, OCD, social withdrawal;
- Disorders of clumsiness, efficiency in task performance, lead to low self-esteem, anxiety;
- Children w/ SPD apt to be bullied for their differences.

Pathways to Professional Development
Building Foundations in Infant and Early Childhood Mental Health

NEW YORK STATE Office of Mental Health

NEW YORK CENTER FOR CHILD DEVELOPMENT

ctac
POWERED BY NYU McSILVER

SPD vs Sensory Reactions Due to Trauma

SPD	Trauma
• Neurological in origin • Shows emotional or behavioral intensity and duration of response disproportionate to the intensity of one or more types of sensory stimuli • Tries to avoid exposure to one or more types of sensory stimuli experienced as aversive • Shows muted emotional or behavioral response when exposed to one or more types of intense sensory stimuli (e.g. long latency to respond, brief duration of response) • Shows intense craving for types of sensory stimuli-seems insatiable/driven	• Exposure to adverse childhood experiences (ACEs) • Shows significant distress (e.g. exaggerated startle, hypervigilance, increased irritability, temper tantrums) when exposed to reminders of the traumatic event(s) • Shows marked physiological reactions (e.g. hyper-arousal, sweating) at reminders of the traumatic event (s) • Shows dissociative episodes(freezes, stills, stares, unresponsive) at reminders of the traumatic event(s)

Pathways to Professional Development
Building Foundations in Infant and Early Childhood Mental Health

NEW YORK STATE Office of Mental Health

NEW YORK CENTER FOR CHILD DEVELOPMENT

ctac
POWERED BY NYU McSILVER

What is Occupational Therapy and What is its Focus in Different Environments?

- *Occupational Therapy* is the art and science of using every-day life activities (occupations) to promote health, well-being, and a person's ability to participate in activities that are important to them.
- For children, OTs focus on play, learning and school performance, self-care, and socialization; and the underlying capacities that support them
- OTs use various diagnostic tools to determine underlying neurodevelopmental or orthopedic causes of problems in these areas (such as sensory processing issues), and OT may address those as preparatory to working on the higher-level skills.

Pathways to Professional Development
Building Foundations in Infant and Early Childhood Mental Health

NEW YORK STATE Office of Mental Health

NEW YORK CENTER FOR CHILD DEVELOPMENT

ctac
POWERED BY NYU McSILVER

Occupational Therapy Role on the Early Intervention or School Team:

- Acts as member of school/EI program team;
- Referral through Early Intervention program, Preschool & School IEP (CPSE & CSE) or Section 504 process; Can inform RTI efforts with students;
- Some minor differences in delivery, depending on the state.
- OT may come to classroom or natural setting (e.g. daycare) and conduct an informal observation of child.

Pathways to Professional Development
Building Foundations in Infant and Early Childhood Mental Health

NEW YORK STATE Office of Mental Health

NEW YORK CENTER FOR CHILD DEVELOPMENT

ctac
POWERED BY NYU McSILVER

Three Levels of Occupational Therapy Intervention

- **Environmental Supports and Modifications:** Adaptations made to the physical environment to support the infant's or child's sensory needs (accommodations).
- **Therapist-Supported Interventions:** Clinical interventions where the occupational therapist trains others via consultation, coaching, or creating home/classroom programs.
- **Therapist-Led Interventions:** Sessions where the occupational therapist is present throughout, guiding and adapting strategy/methods based on client responses. More direct approach.

(Bodison, 2015, p.-15)

Pathways to Professional Development
Building Foundations in Infant and Early Childhood Mental Health

NEW YORK STATE Office of Mental Health

NEW YORK CENTER FOR CHILD DEVELOPMENT

ctac
POWERED BY NYU McSILVER

Occupational Therapy for SPDs: What does it involve?

- Careful data collection via observation, intake interview & assessment. Provision of report & intervention plan, consultation recommendations.
- RTI support of student(s)' sensory needs.
    - Adaptation of environment - Provision of choices where appropriate
- Sensory modulation issues (sensory hyper- or hypo-sensitivity) usually require both adaptive and direct intervention to resolve.
- Activities/adaptations that integrate basic sensory systems (vestibular, proprioception, tactile, visual) are most effective.
- Principles of the above can be applied to the family home, daycare, other natural environments with which the child interacts, inhabits

Pathways to Professional Development
Building Foundations in Infant and Early Childhood Mental Health

NEW YORK STATE Office of Mental Health

NEW YORK CENTER FOR CHILD DEVELOPMENT

ctac
POWERED BY NYU McSILVER

Occupational Therapy Intervention for SPDs: What does it involve?

- Address postural issues (muscle hypotonicity; postural responses and postural organization for equilibrium, balance, functional movement, as these affect attention to the environment;
- Classroom activities to address imitation, motor planning, sequencing, motor confidence, symbolic play, socialization;
- Specialized interventions: oral-motor; food aversions; auditory processing intervention; fine motor; handwriting, etc.
- Coaching/consultation regarding the above to family in Early Intervention or Classroom.

Pathways to Professional Development
Building Foundations in Infant and Early Childhood Mental Health

NEW YORK STATE Office of Mental Health

NEW YORK CENTER FOR CHILD DEVELOPMENT

ctac
POWERED BY NYU McSILVER

Application of Sensory-Based Strategies within Early Intervention or Mental Health

- Coach family/teachers to identify sensory triggers to dysregulation; how to read child's cues;
- Explore psychological triggers child's dysregulation may evoke;
- Parent-infant psychotherapy;
- Staff: Avoiding "knee jerk" reactions; contain child's negative affect vs. anxiety/reactivity;
- Explore "goodness of fit" aspects—recognize we have our own temperament as does child; be aware of our own "buttons" (triggers) and how we respond to child behaviors.

Pathways to Professional Development
Building Foundations in Infant and Early Childhood Mental Health

NEW YORK STATE Office of Mental Health

NEW YORK CENTER FOR CHILD DEVELOPMENT

ctac
POWERED BY NYU McSILVER

Application of Sensory-Based Strategies within Early Intervention or Mental Health

- Begin each new activity set with children in the regulated state;
- How to "talk child through"; re-framing problems; When children are in a state of high-arousal, they typically cannot retrieve and use their words;
- Support OT environmental modifications & strategies, practice in own sessions;

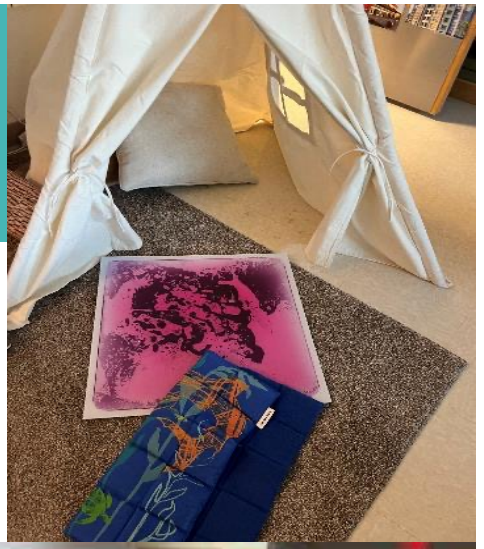
Pathways to Professional Development
Building Foundations in Infant and Early Childhood Mental Health

NEW YORK STATE | Office of Mental Health

NEW YORK CENTER FOR CHILD DEVELOPMENT

ctac
POWERED BY NYU McSILVER

Application of Sensory-Based Strategies within Intervention Environments (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; control of lighting;
- 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);

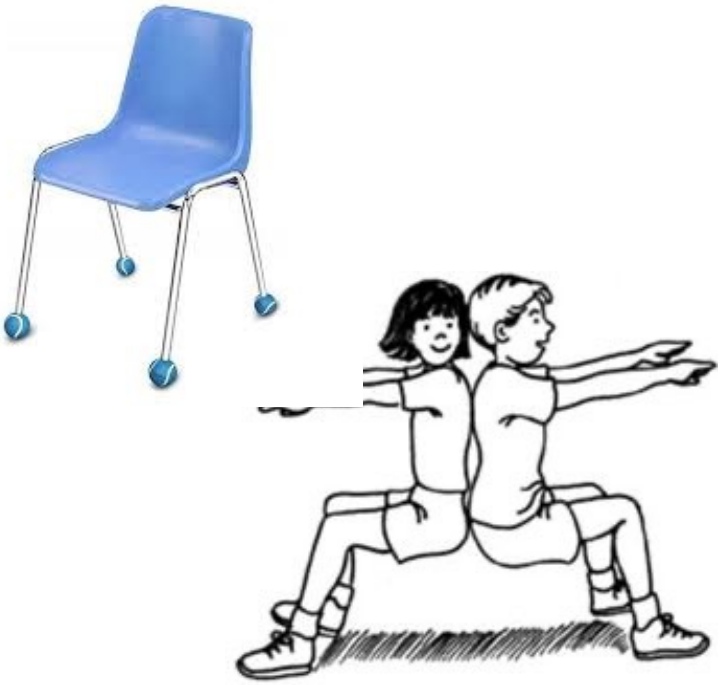
Pathways to Professional Development
Building Foundations in Infant and Early Childhood Mental Health

NEW YORK STATE Office of Mental Health

NEW YORK CENTER FOR CHILD DEVELOPMENT

ctac
POWERED BY NYU McSILVER

Application of Sensory-Based Strategies within Intervention Environments (when possible)



- 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 (a great morning “wake-up our brain” activity!)

Pathways to Professional Development
Building Foundations in Infant and Early Childhood Mental Health

NEW YORK STATE Office of Mental Health

NEW YORK CENTER FOR CHILD DEVELOPMENT

ctac
POWERED BY NYU McSILVER

Environmental Modifications

Level of ambient stimulation in the surrounding environment:

- **Visual** (light levels, sun exposure); allow sunglasses if over-responsive to light; have low light periods
- **Auditory** (Ambient music (Bach, Mozart, Satie, meditative music, white noise); or musical instruments for alerting
- Provide option of "ear protectors" for loud ambient environments, like school gym, assemblies, sports events.

Pathways to Professional Development
Building Foundations in Infant and Early Childhood Mental Health

NEW YORK STATE Office of Mental Health

NEW YORK CENTER FOR CHILD DEVELOPMENT

ctac
POWERED BY NYU McSILVER

Activities and Materials to Encourage

- **Proprioceptive**: Weight, volume- “the child must heft the object to know the object”; play with resistive materials such as play-dough, heavy sand; work bench hammering with rubber mallet.
- **Vestibular:** Sit n’ Spin, rocking chair(s), dancing, movement games; Playground swings, slides, other equipment
- **Touch/tactile**: Make available fidget toys; ripping paper; sensory materials-water, sand, shaving cream, finger painting.

Pathways to Professional Development
Building Foundations in Infant and Early Childhood Mental Health

NEW YORK STATE Office of Mental Health

NEW YORK CENTER FOR CHILD DEVELOPMENT

ctac
POWERED BY NYU McSILVER

Classroom Modifications

- Clear boundaries are calming!
- Provide a quiet semi-enclosed space for children to retreat during free time (a tent or cozy-corner)
- Demarcate space: use tape to define individual task areas; arrange cabinetry to define task areas; color coding; area rugs.

Pathways to Professional Development
Building Foundations in Infant and Early Childhood Mental Health

NEW YORK STATE Office of Mental Health

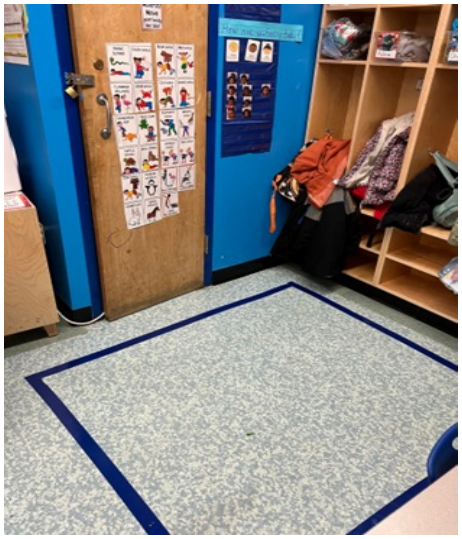
NEW YORK CENTER FOR CHILD DEVELOPMENT

ctac POWERED BY NYU McSILVER

Environmental Modifications

Classroom Design:

- Avoid “bowling-alley” spaces to reduce running in classroom;
- However, do provide opportunities for active movement!
- Define circulation space with tape, footprints.
- Carpeting reduces noise
- Use wall space judiciously; too much creates visual overload in some students



Pathways to Professional Development
Building Foundations in Infant and Early Childhood Mental Health

NEW YORK STATE | Office of Mental Health

NEW YORK CENTER FOR CHILD DEVELOPMENT

ctac
POWERED BY NYU McSILVER

(More) “Cozy Corner” Space ideas

Other Environmental Modifications

Seating Guidelines/Options:

- Feet best on flat support surface (not dangling), but “sitting on leg/foot” is OK;
- Chairs should provide sufficient trunk and pelvis/hip support
- Body should be aligned, knees slightly higher than hips
- May provide an inflatable pillow on chair seat to allow for “wiggling”, bumpy cushion gives additional tactile input
- Desks away from windows and doors.
- Option of Pilates-ball chairs for “movers”

Sensory-Friendly Seating Options

Pathways to Professional Development
Building Foundations in Infant and Early Childhood Mental Health

NEW YORK STATE Office of Mental Health

NEW YORK CENTER FOR CHILD DEVELOPMENT

ctac
POWERED BY NYU McSILVER

Other Environmental Modifications

Seating Guidelines/Options (continued):

- **Floor sitting:** crisscross, long-leg, half-ring, side-sitting; "W" is OK if not "stuck"
- **Flexed (bending) positions are organizing** (fetal-like positions); extension positions (stretching) are activating;
- Sitting on a therapy ball, lying prone over a bolster-roll
- "Howda Hug", a floor-based rocking chair; allows child to satisfy vestibular needs and attend better

Pathways to Professional Development
Building Foundations in Infant and Early Childhood Mental Health

NEW YORK STATE Office of Mental Health

NEW YORK CENTER FOR CHILD DEVELOPMENT

ctac
POWERED BY NYU McSILVER

Classroom Sensory Area

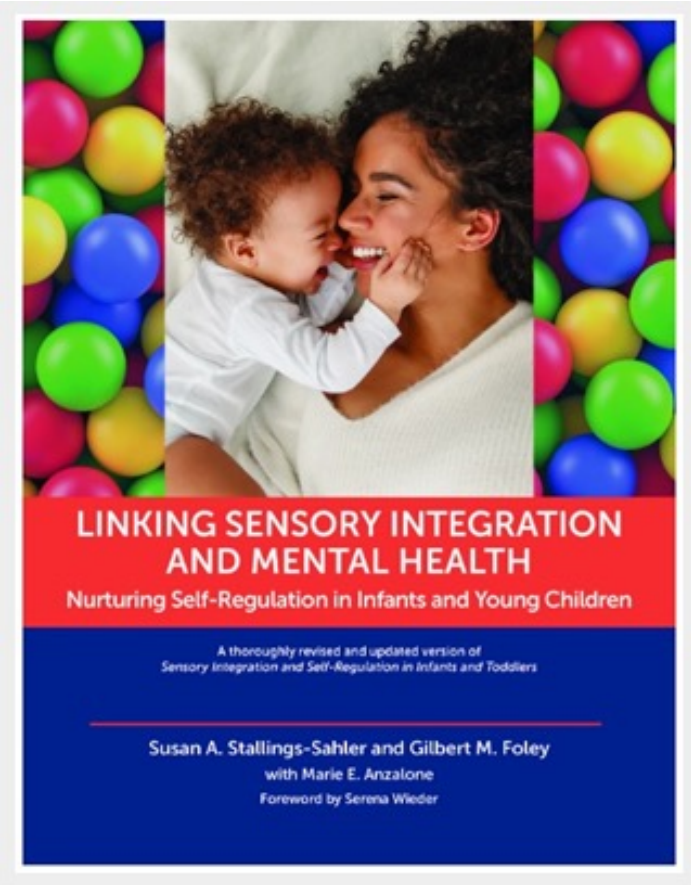
SENSORY INPUT TO ASSIST SELF-REGULATION

CALMING (but can over-inhibit)	**TYPE OF SENSORY EXPERIENCE**	**ALERTING** (but can be overwhelming)
Dim, constant light, close boundaries, simple patterns, pastel colors; low eye contact	**VISUAL**	Bright light, flickering not repetitive; open spaces; complex patterns, bright primary colors
Deep base tones (low frequency), rhythmic, lyrical	**AUDITORY**	Fast pace, dysrhythmic, louder, unpredictable;
Deep pressure; heavy work, pushing/pulling, climbing,	**PROPRIOCEPTIVE**	Fast pumping movements of joints, muscles; jumping
Slow, rhythmic; head-toe direction rocking	**VESTIBULAR**	Fast, dysrhythmic, “jerking”, rotatory, jumping on trampoline;
Deep total-body pressure (swaddling); warm temps; smooth surfaces	**TACTILE**	Light touch, cold temps, prickly textures (subjective depending on the child)
Mildly sweet, vanilla, savory	**SMELL/TASTE**	Pungent, spicy-”hot”, sour,

Case: Cari, 5 y.o. w/ vestibular over-response and dyspraxia

- Referred for OT Evaluation for fine motor and possible visual perceptual delays, causing issues with written expression; excessively fearful on playground; beginning to be bullied by others.
- Evaluation showed extreme fear of movement, having feet off of floor/ground; delays in visual-spatial and visual-motor functions; low scores on proprioceptive awareness; low muscle tone; fine and gross motor delays; shyness and anxiety.
- Focus of therapy started with normalization of her vestibular-proprioceptive processing; she responded well, leading to resolution of gravitational insecurity, which unmasked her motor planning disorder.

QUESTIONS/COMMENTS?



For more information, our book can be purchased at:

https://zerotothree.my.site.com/s/store#/store/browse/detail/a3G8a00000ExzBOEAZ

Or by calling: 1-800-899-4301

Thank you for participating!

Pathways to Professional Development
Building Foundations in Infant and Early Childhood Mental Health

NEW YORK STATE | Office of Mental Health

NEW YORK CENTER FOR CHILD DEVELOPMENT

ctac
POWERED BY NYU McSILVER

References

Ahn, R. R. Miller, L. J., Milberger, S., & McIntosh, D. N. (2004) . Prevalence of parents' perception of sensory processing disorders among kindergarten children. American Journal of Occupational Therapy, 58, 287-302.

Anzalone, M (2018, March). Sensory contributions to young children's social-emotional development presented at the meeting of the Training and Technical Assistance Center (TTAC), New York City.

Ayers, J (1964). Tactile functions: There relations to hyperactivity and perceptual motor behavior. American Journal of Occupational Therapy, 18, 6-11.

Ben-Sasson, A., Cermak, S. A., Orsmond, G. I., Carter, A. S., & Fogg, L (2007). Can we differentiate sensory-over-responsivity from anxiety symptoms in toddlers? Perspectives of occupational therapists and psychologists. Infant Mental Health Journal, 28, 536-558.

Bodison, S. C. (2015). A comprehensive framework to embed sensory interventions within Occupational Therapy practice. Health and Wellness, 14-16.

Cannon, W. B. (1932). The wisdom of the body. New York: Norton.

Carver , C. S. , & Scheier, M. F. (2016). Self-regulation of action and affection. in K.D. Vohs R. F. Baumeister(Eds.), Handbook of self-regulation: Research, theory and applications (pp. 3-23). New York: Guilford Press.

Dunn , W. (2014). Sensory Profile-2: User's manual. San Antonio, TX: The Psychological corporation.

Pathways to Professional Development
Building Foundations in Infant and Early Childhood Mental Health

NEW YORK STATE Office of Mental Health

NEW YORK CENTER FOR CHILD DEVELOPMENT

ctac
POWERED BY NYU McSILVER

References

Erikson, E. H., Erikson, J. (1998). The life cycle reconsidered. New York: WW Norton.

Foley, G. M. (2017). Play as regulation: Promoting self-regulation through play. Topics in Language Disorders, 3 (3), 241-258.

Goldsmith , HH, Van Hulle, C. A., Arneson, C. L., Schreiber, J. E., & Gernsbacher, M. A. (2006). A population-based twin study of parentally reported tactile and auditory defensiveness in young children. Journal of Abnormal Child Psychology, 34 (3), 393-407.

Gray, J. A. (1982). The neuropsychology of anxiety: An enquiry into the function of the septo-hippocampal system. clarendon: Oxford.

Lester, B. M., Freier, K., & LaGassa, L. (1995) Parental cocaine exposure and child outcome: What do we really know. In M. Lewis & M. Bendersky (Eds.). , Mothers babies , and cocaine: The role of toxins in development (pp.19-40). Hillside, NJ: Erlbaum.

Liebman, E., & Foley, G. M. (2016, May). The relationship between anxiety symptoms and sensory processing disorder in a preschool population. Poster session presented at the 15th World Association of Infant Mental Health, Prague, CZ.

McIntosh, D. N., Miller, L.J., Shyu. V., & Hagerman (1999). Sensory-modulation disorder, electrodermal responses, and functional behaviors. Developmental Medicine & Child Neurology, 41, 608-615.

Stallings-Sahler, S. & Foley, G. M. (with M. Anzalone)(2022). Linking sensory integration and mental health: Nurturing self-regulation in infants and young children. ZERO TO THREE.

.

Pathways to Professional Development
Building Foundations in Infant and Early Childhood Mental Health

NEW YORK STATE Office of Mental Health

NEW YORK CENTER FOR CHILD DEVELOPMENT

ctac
POWERED BY NYU McSILVER