BRAIN DEVELOPMENT, RELATIONSHIPS AND SCHOOL READINESS
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GETTING TO KNOW YOU

Activity
A relationship that impact you still today that was formed when you were young.
Brain Architecture

- https://youtu.be/VNNsN9IJKws
THE STAMP THAT CAN BE MADE

- How does the brain taken in all these experiences and develop?
  - At birth a baby is born with 100 billion neurons.
  - From birth the neurons begin to connect via synapses and develop pathways based on the experiences a child has in their environments and with their caregivers.
  - The brain pathways grow and become increasingly dense based on the type of interactions that are occurring.
    - Touch
    - Sound
    - Feeding
    - Emotions – fear, joy, stimulation
  - ***The brain also experiences ‘pruning’ – in which all connections that are inefficient or not frequently used are lost.

WHAT IS SOCIAL-EMOTIONAL DEVELOPMENT

The term social emotional development refers to:

- the developing capacity of the child from birth through eight years of age to form close and secure adult and peer relationships;
- experience, regulate, and express emotions in socially and culturally appropriate ways;
- explore the environment and learn - all in the context of family, community, and culture.

Adapted from ZERO TO THREE, 2001
Why is it Important?

- Confidence
  - Capacity to develop good relationships with peers and adults
  - Concentration and persistence on challenging tasks
  - Ability to effectively communicate emotions
  - Ability to listen to instructions and be attentive
  - Ability to solve social problems
BUILDING RELATIONSHIPS

- Helps each child feel accepted in the group;
- Assists children in learning to communicate and get along with others;
- Encourages feelings of empathy and mutual respect among children and adults;
- Provides a supportive environment in which children can learn and practice appropriate and acceptable behaviors as individuals and as a group;
- Develop a sense of community and pride – support and protect one another.
BUILDING RELATIONSHIPS

Why is it important?

1. The relationships that we build with children, families, and colleagues are at the foundation of everything we do. It is important to build these relationships early on rather than waiting until there is a problem.

2. Children learn and develop in the context of relationships that are responsive, consistent, and nurturing.

3. Children with the most challenging behaviors especially need these relationships, and yet their behaviors often prevent them from benefiting from those relationships.

4. Adults’ time and attention are very important to children, and we need to be sure that we are giving them that time and attention at times other than when they are engaging in challenging behavior.

5. Parents and other colleagues (such as mental health providers and therapists) are critical partners in building children’s social emotional competence. We should all work together to ensure children’s success and prevent challenging behavior.
WHAT A RELATIONSHIP REALLY MEANS

"What my foster family was tearing down in me was starting to build back up in fifth grade because of her. She made me understand, just the way she treated me, that there were good people in the world," he said of that teacher.

- Antwone Fischer
SERVE AND RETURN

- https://youtu.be/m_5u8-QSh6A
EFFECTS OF CHRONIC NEGLECT

Healthy Brain
This PET scan of the brain of a normal child shows regions of high (red) and low (blue and black) activity. At birth, only primitive structures such as the brain stem (center) are fully functional; in regions like the temporal lobes (top), early childhood experiences wire the circuits.

Front

Temporal lobes

Back

An Abused Brain
This PET scan of the brain of a Romanian orphan, who was institutionalized shortly after birth, shows the effect of extreme deprivation in infancy. The temporal lobes (top), which regulate emotions and receive input from the senses, are nearly quiescent. Such children suffer emotional and cognitive problems.
Toxic Stress

https://youtu.be/rVwFkcOZHJw
**Stress Response Systems**

- When a young child’s stress response systems are activated within an environment of supportive relationships with adults:
  - physiological effects are buffered and brought back down to baseline.
  - Result: the development of healthy stress response systems.

- If the stress response is extreme and long-lasting, and **buffering relationships are unavailable to the child**, the result can be damaged, weakened systems and brain architecture, with lifelong repercussions.

[link to Harvard website discussing stress response systems](http://developingchild.harvard.edu/topics/science_of_early_childhood/toxic_stress_response/)
THE IMPORTANCE OF BUFFERING

Healthy Brain and Social-Emotional Development and Adequate Sense of Self

Consistent care giving
Reliable relationships
Intentional Teaching of Social-Emotional Skills
When and How?

- Schedule Opportunity
  - Arrival
  - Play Time
  - Changing Time
  - Sleep routines
    - Wake up
    - Bed time
    - Nap
  - Feeding
  - Transitions
ARRIVAL

- Greet children/parents by name
  - Be detailed orientated in your greeting – show families you care.
  - Eye contact – calm voice.
  - Consistent routines (starting play, eating or floortime discussion or play together)

- Allow choices
  - Would you like OJ first or your waffle?/Which game would you like to play?
  - Even non-verbal children can move through narratives of decisions.
  - Allow parents be a part of choosing activities.
    - Empowerment
    - Increased likelihood of giving what one has received.

- At breakfast talk about their plans for the day?
  - What would you like to do today?
  - Welcome one another.
  - For infants talk about the fun things you will do today. Even though they are pre-verbal.

- Allow for time for transition.
  - Sitting and rocking, reading, singing, talking.

ENCOURAGE THE CHILDREN TO BE A PART OF GREETING ONE ANOTHER OR OTHER CAREGIVERS.
PLAY TIME

- Tone of voice
  - Verbalize what they are doing
    - Likes, dislikes, strengths, changes, reactions

- Singing.

- Touch and eye contact
  - Be on their level
  - Verbalize and be aware of parallel play and encourage it.

- Predictability
  - Floaters

- Cues

- Temperaments
CHANGING TIME

- Narrate movements and transitions
- Understand their reactions (not at misbehavior)
  - Verbalize
- Make it fun
  - Sing
  - I Spy
  - Stories
**Sleep Routines**

- Ensure the transition of respectful of the child’s state of need
  - Not rushed or panicked
  - Comforting – aware of sleep routines
    - Patting
    - Blanket
    - Pacifier

- Ensure the environment is supportive of restful sleep.

- Talk the child through it, narrating changes, feelings, body cues.
FEEDING Routines

- Sit at the table or hold infants;
- Talk about things the kids are interested in;
- Smile and have eye contact;
- Sing, talk, tell stories, JUST BE PRESENT;
- Encourage interaction and team work with peers;
- Understand challenging behaviors have a reason
  - Tired
  - Hungry
**Transitions**

- Verbalize what you are doing;
- Be calm and predictable;
- Make sure you are transitioned prior to transitioning the children. Your emotion will fuel theirs.
- Use song.
- Share what is next with excitement!
Visually

- Pictures of children who look like them;
- Celebrate families!
- Display artwork
- Notes home with POSITIVE information!!
- Make board books with family pictures.
- Place pictures of activities you have done as a group or during home visits on walls or books.
FAMILIES

- Say hello and goodbye;
- Be excited to see their child;
- Know their names;
- Share positive information;
  - Child
  - Parent
- Tell them funny stories!
COPING WITH STRESS

- Infants – adult support in regulating emotions and needs with narration of feelings.
  - Adults who themselves are able to maintain patience and emotional control in order to regulate the infant.
- Infant/Toddler – enhance verbalization and labeling of feelings.
  - Be present in these feelings, helping children learn what they look like on themselves and others.
    - Amy looks sad Ms. Taylor is leaving for lunch.
    - Devin is mad you took his blanket.
  - Teach short, easy words for expression
    - Mad/sad/happy
    - Sign language
  - Preschool - begin to use tools like social stories, more advance visual reminders, solution kit, puppets, skills learning skits, etc.
Executive Function

What is it?

- Frontal Lobe – present at birth however are developing through teen years.
  - Maturation and experiences.
- Mental processes that enable us to plan (plan a task), focus attention (focus on task), remember instructions and juggle multiple tasks successfully (complete a task).
- Allows the brain to filter distractions, prioritize tasks and achieve goals and control impulses.
  - Depend on three types of brain function:
    - Working memory – retain and manipulate distinct pieces of information over short periods of time.
    - Mental Flexibility – helps to sustain or shift attention in response to different demands or to apply different rules in different settings.
    - Self-Control – enables us to set priorities and resist impulsive actions or responses.

http://developingchild.harvard.edu/science/key-concepts/executive-function/
EXECUTIVE FUNCTION

- Children are not born with executive function.
  - Relationships and environments are critical.
  - Impact of toxic stress on brain development and therefore development of executive function.

- Our responsibilities
  - Facilitate this development through predictable routines, modeling healthy social behavior, and being present in consistent reliable relationships.
  - Providing space for creative play, social interaction, coping with stress and problem solving, exercise with the end results requiring less and less adult supervision.
Why It Matters?

Brain Development is shaped by experiences.
  - We have the power to impact biology and life long outcomes:
    - Emotional regulation;
    - Behavior control;
    - Abstract and concrete thought;
    - Relationship development.

All of these lead to next step skills:
  - Literacy;
  - Critical thinking;
  - Decision making;
  - Physical Health;
  - School Readiness
PULLING IT TOGETHER

Healthy Brain and Social-Emotional Development and Adequate Sense of Self

Consistent care giving

Reliable relationships

Intentional Teaching of Social-Emotional Skills

Higher likelihood for academic readiness and success
RESILIENCE

- https://youtu.be/cqO7YoMsccU
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