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## Promotes Children's Wellbeing in the First Year of Life and Parental Confidence Through Evidence-Based Knowledge

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# Promotes Children's Wellbeing in the First Year of Life and Parental Confidence Through Evidence-Based Knowledge

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*In collaboration with:*

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UOP Mentor: Felicia Markfield, OTD, OTR/L



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# Background

- The first year of life is a period marked by rapid growth and development.
- The journey through infancy also presents numerous challenges for parents during the transition period.
  - Navigating sleep patterns
  - Understanding and supporting the child's developmental milestones
    - Sleep
    - Play
    - Sensory-motor
- Maternal mental health challenges

Confidence



Evidence-based knowledge

(American Academy of Pediatrics, n.d; World Health Organization, 2021; Hanafin, 2018, Bathory & Tomopoulos, 2017; Case-Smith & O'Brien, 2015)



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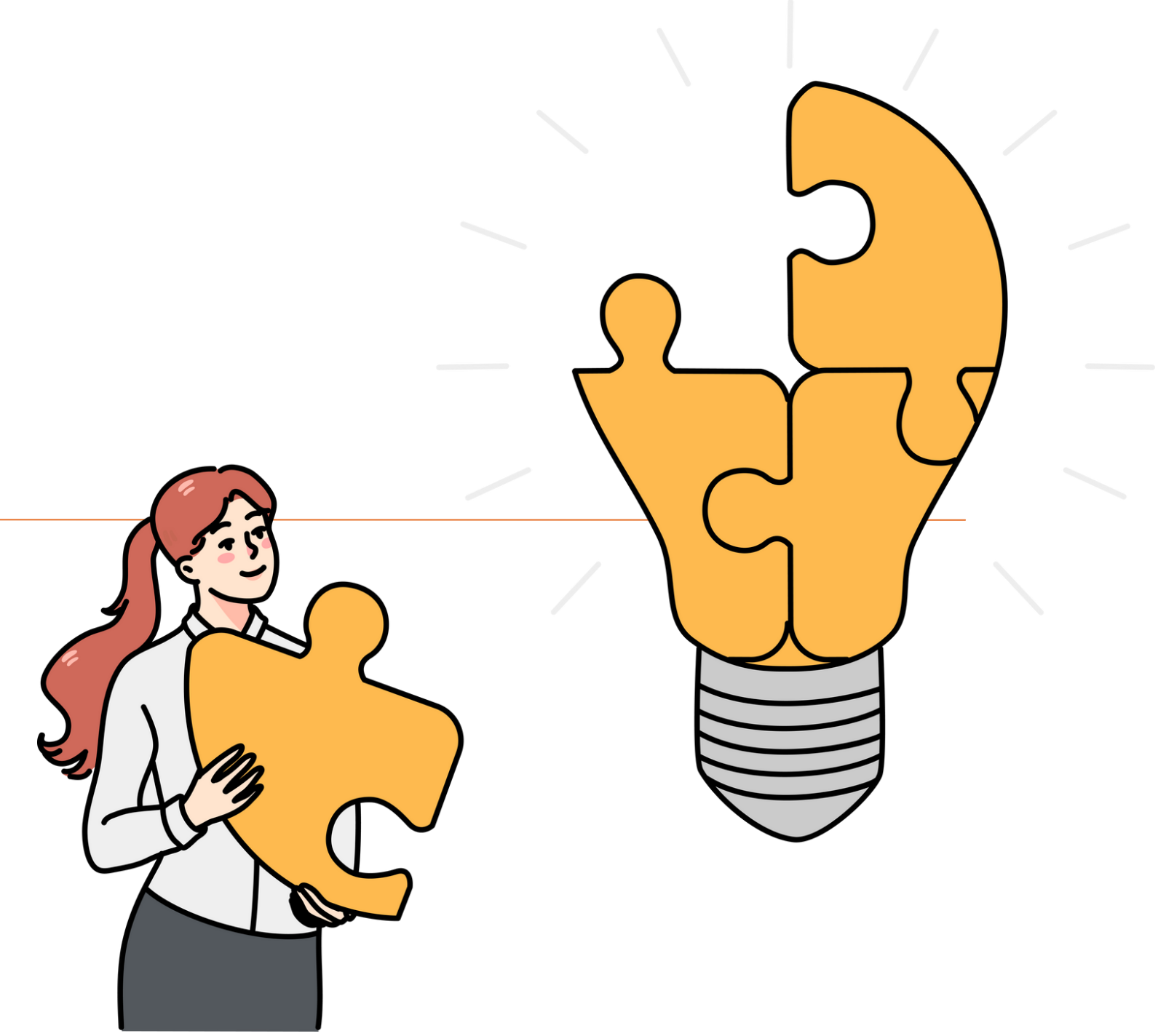


# Literature Review

## Findings and Themes

- **Challenges for new parents**
  - Common concerns about child development
  - Unreliable internet and social media sources
  - Cultural beliefs influence parenting aspects
  - Increased stress, anxiety, and feeling overwhelmed
- **Roles of evidence-based resources:**
  - Reliable, scientifically validated information
  - Accessible educational resources
  - Reduces overwhelming, enhance capability in managing child's needs

(Adlington et al., 2023; De-la-Morena-Perez et al., 2023; Aoyagi & Tsuchiya, 2019; Satyanarayana et al., 2011; Yoo et al., 2021; Michelson et al., 2016; Boe & Woods, 2018; Ilyka et al., 2021)



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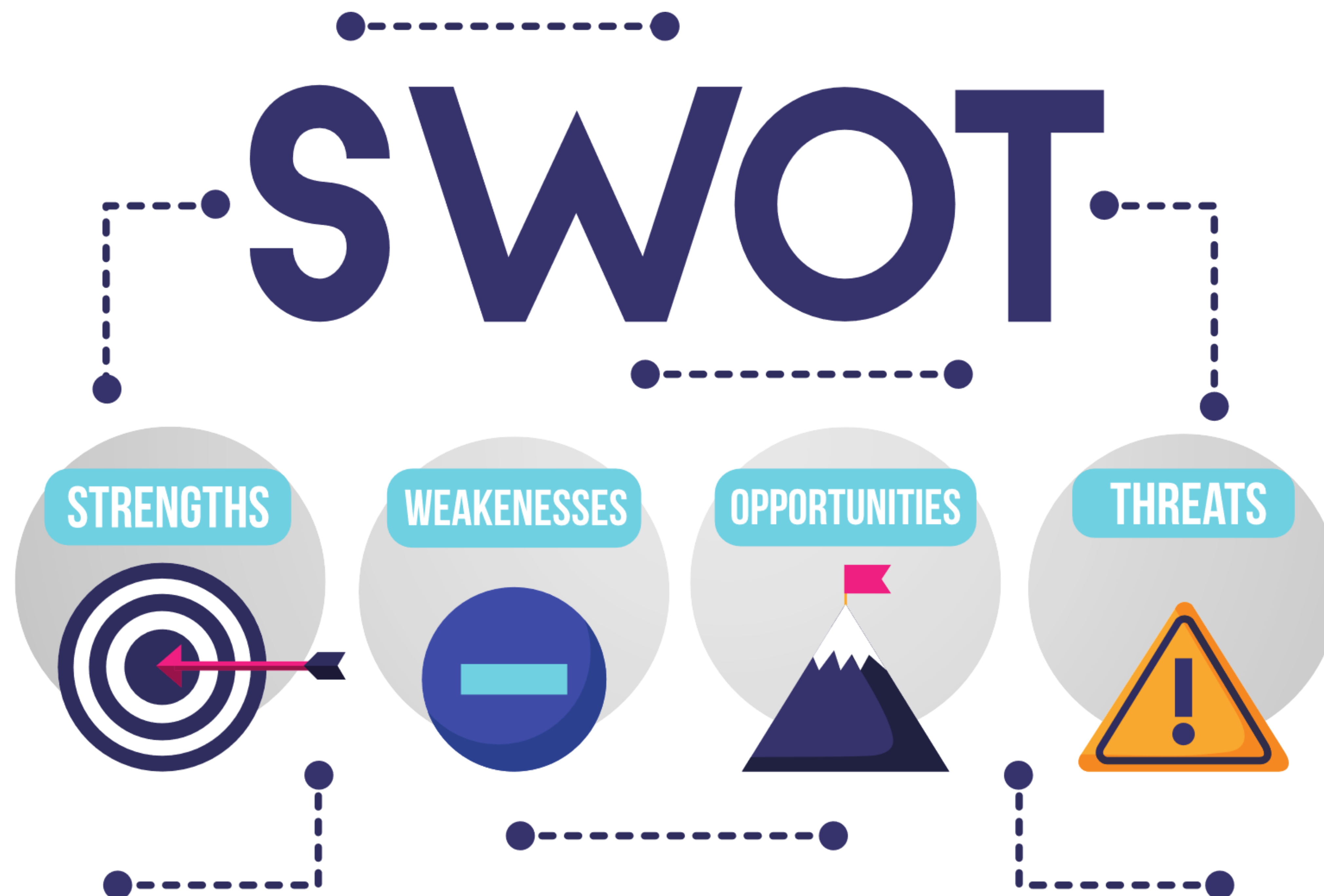
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# Needs Assessment

**Capstone Organization:** Noelle Haight, LLC  
**Community Site Mentor:** Noelle Haight, OTR/L

## SWOT Analysis with Capstone site



(Parfitt & Ayers, 2014; Tully et al., 2017)



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# Program Purpose

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Evidence based  
knowledge is key



Promotes infant  
wellbeing and  
parental confidence  
during transition  
into parenthood



Increases maternal  
mental health  
awareness



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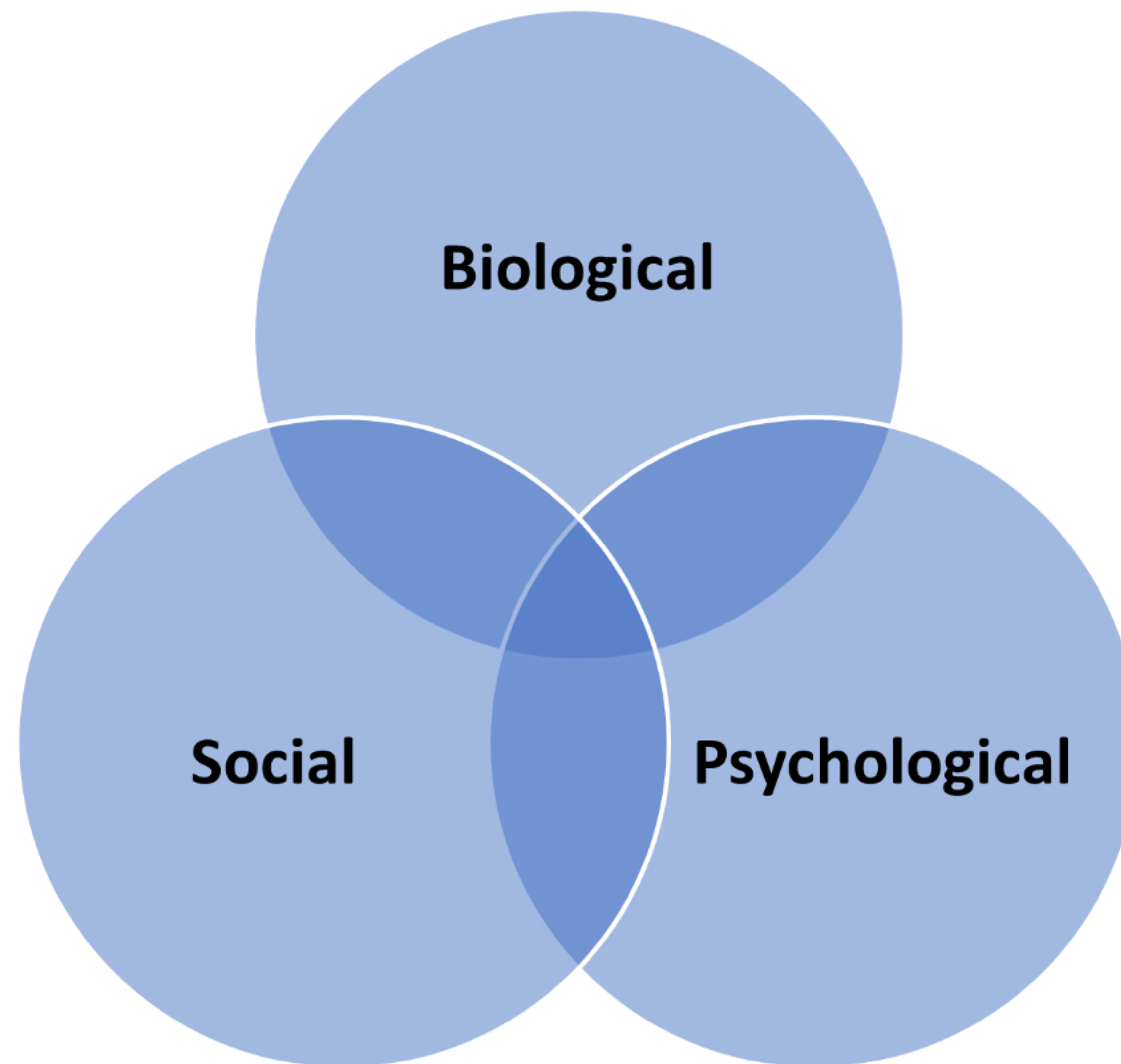
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# Guiding Theory

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## Biopsychosocial Model



(Gentry, Snyder, Barstow, & Hamson-Utley, 2018)



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# Guiding Theory

## The Person-Environment-Occupation Model (PEO)



(Bass, Marchant, de Sam Lazaro, & Baum, 2024)



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# Outcomes: Sensorimotor Development Handout and Webinar

## SENSORY MOTOR DEVELOPMENT MILESTONES 0-3 Months

### VISION

- At birth, babies can not distinguish between different targets or move their eyes between them.
- Focus on objects 8-10 inches away, such as the parent's face.
- In the first few months, their vision improves as their eyes start working together. Eye hand coordination also develops as they begin tracking moving objects and reaching for them.
- By 8 weeks, babies can focus more easily on their faces.
- In the first 2 months, it's normal for their eyes to appear uncoordinated or crossed.
- By 3 months, babies should start following moving objects and reaching for them.



- Age-appropriate activities that can enhance visual development.
- Alternate sides when feeding the baby.
- Talk to the baby while moving around the room.
- Keep toys approximately 8-12 inches away, within the baby's focus.

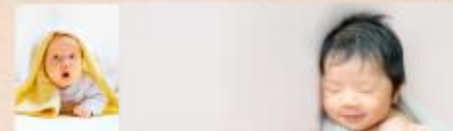
### TASTE

- Research shows that newborns have a sense of taste and can differentiate between sweet, sour, bitter and salty flavors.
- They exhibit a strong preference for sweet tastes, which is evident from their response to breast milk or formula.



### HEARING

- Responds to loud noises
- Calms or smiles when spoken to
- Recognizes and is soothed by familiar voice
- Adjusts sucking during feeding in response to sounds
- Coos and makes happy sounds
- Cries differently based on needs



### SMELL & TOUCH

- Prefers sweet smells
- Recognizes mother's breast milk scent
- Mouthing objects also strengthens oral muscles, which is essential for feeding and speech development.
- Oral exploration helps hand-to-mouth coordination and motor skills.



### MOTOR DEVELOPMENT

- Reflexes such as rooting reflex (baby will turn their head and open their mouth when you touch their cheek) and step reflex (baby will make stepping motions if you hold them upright with their feet touching a surface) are present
- Babies can lift their heads when on tummies, which helps build neck and trunk strength
- Startle reflex (when babies throw out their arms and legs in response to a loud noise or sudden movement) diminishes around 3 months.



### RECOMMENDATIONS

- At least 30 minutes per day for tummy time is associated with improved motor skills needed for rolling, crawling, lifting the head, and moving arms and legs while prone. Regular tummy time can help prevent brachycephaly (flat head syndrome).
- AAP Safe sleep recommendations:
- always place the baby on their back to sleep to reduce the risk of SIDS, especially when swaddled. Monitor the baby to prevent them from rolling over.
- stop swaddling once the baby shows signs of rolling over, which can occur as early as 2 months of age.

References



## SENSORY MOTOR DEVELOPMENT MILESTONES 4-7 Months

### VISION

- During these months, babies' control over eye movements and coordination improves.
- Depth perceptions, which allow judging distances, begin to develop around the fifth month when the eyes start working together for a three-dimensional view.
- By fifth month, babies typically have good color vision, though it is not as sensitive as adults'.
- Age-appropriate activities that can enhance visual development
- Give the baby ample time to play and explore on the floor
- Allow the baby to grab, pull and kick various objects



### HEARING

- Tracks sounds with their eyes
- Reacts to changes in your voice tone
- Notices sound-making toys
- Pays attention to music
- Bubbles in a speech-like manner, using sounds like p, b, and m
- Laughs
- Bubbles when excited or upset
- Makes gurgling sounds when alone or playing with you



### TASTE & SMELL

- Around 4-6 months, infants start tasting solid foods.



### TOUCH

- By 4 months, babies can bring objects to their mouth .



### MOTOR DEVELOPMENT

- Babies begin to push up on their arms and arch their back, strengthening the upper body.
- Typically, by around 5 months, they start to rock, kick and "swim" with their arms, leading to rolling over.
- Most babies roll from stomach to back first, but rolling both ways is normal by the end of this period.
- With strengthened chest muscles, babies can practice sitting up with support.

### RECOMMENDATIONS

Encourages use tummy time to strengthen neck and trunk muscles



References



## SENSORY MOTOR DEVELOPMENT MILESTONES 8-12 Months

### VISION

- Around 9 months, babies start pulling themselves up to stand.
- By 10 months, they can grasp objects with their thumb and index finger.
- Most babies will be crawling and attempting to walk by 12 months.
- Encouraging crawling helps develop eye-hand coordination.
- Babies also improve at judging distances and can throw objects with accuracy.
- Age-appropriate activities that can enhance visual development
- Play hide-and-seek with toys or your face to develop the baby's visual memory.
- Name objects during conversations to help the baby build word association and vocabulary skills.
- Encourage crawling and creeping.



### HEARING



### TASTE & SMELL

- Babies continue exploring new flavors and textures.
- By this age, they can handle more complex tastes and combinations of foods.
- Studies showed that a diverse diet introduced during infancy supports the development of a varied palate and healthier eating habits in childhood.



### TOUCH

- Uses pincer grasp (using the thumb and index finger to hold small objects) and engages in activities like banging cubes together
- Puts objects into containers and takes them out voluntarily
- Begins poking with index finger and attempts to imitate scribbling



### MOTOR DEVELOPMENT

- Babies can sit without support, though they may still topple occasionally.
- They strengthen trunk muscles and reach for objects while seated.
- They can turn over at will and may flip suddenly, requiring extra caution during diaper changes.
- Strengthening muscles for crawling, typically mastered between 7 to 10 months.
- Some babies may scoot on bottoms or slither on stomachs as alternatives.
- Babies pull themselves to a standing position and take tentative steps while holding onto support.
- They may cruise alongside furniture, and initial steps may be shaky but soon become more confident.



References



Using Evidence-based Knowledge on  
Sensorimotor Development  
to Promote Infant Well Being  
and Parental Confidence  
in the First Year of Life



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# Outcomes: Play Development Handout and Webinar

USING EVIDENCE-BASED KNOWLEDGE ON PLAY DEVELOPMENT  
TO PROMOTE INFANT WELL BEING AND PARENTAL CONFIDENCE  
IN THE FIRST YEAR OF LIFE

## PLAY DEVELOPMENT MILESTONE 0-3 MONTHS

### Developmental focus:

- Visual and auditory stimulation
- Sensory explorations
- Mouthing objects
- Tummy time

### Suggestions

- High contrast patterns toys can stimulate visual development
- Soft toys with rattles can stimulate attention, hearing and grasping.
- At least 30 minutes per day for tummy time is associated with improved motor skills needed for rolling, crawling, lifting the head, and moving arms and legs while prone.
- Regular tummy time can help prevent brachycephaly (flat head syndrome).



#### Reference

American Academy of Pediatrics. (n.d.). Developmental milestones. Retrieved June 10, 2024,

## PLAY DEVELOPMENT MILESTONE 4-8 MONTHS

### Developmental focus:

- Eye-hand coordination
- Reaching
- Grasping
- Kicking
- Sensory exploration
- Continuing tummy time
- Oral exploration with solid food at 6 months
- Rolling

### Suggestions

- Mats with hanging toys during tummy time encourage reaching, grasping, strengthening neck and core muscles
- Safe textured teething toys encourage babies to explore objects with their mouths
- Introducing simple stacking cups, blocks to teach size and problem solving skills



#### Reference

American Academy of Pediatrics. (n.d.). Developmental milestones. Retrieved June 10, 2024,

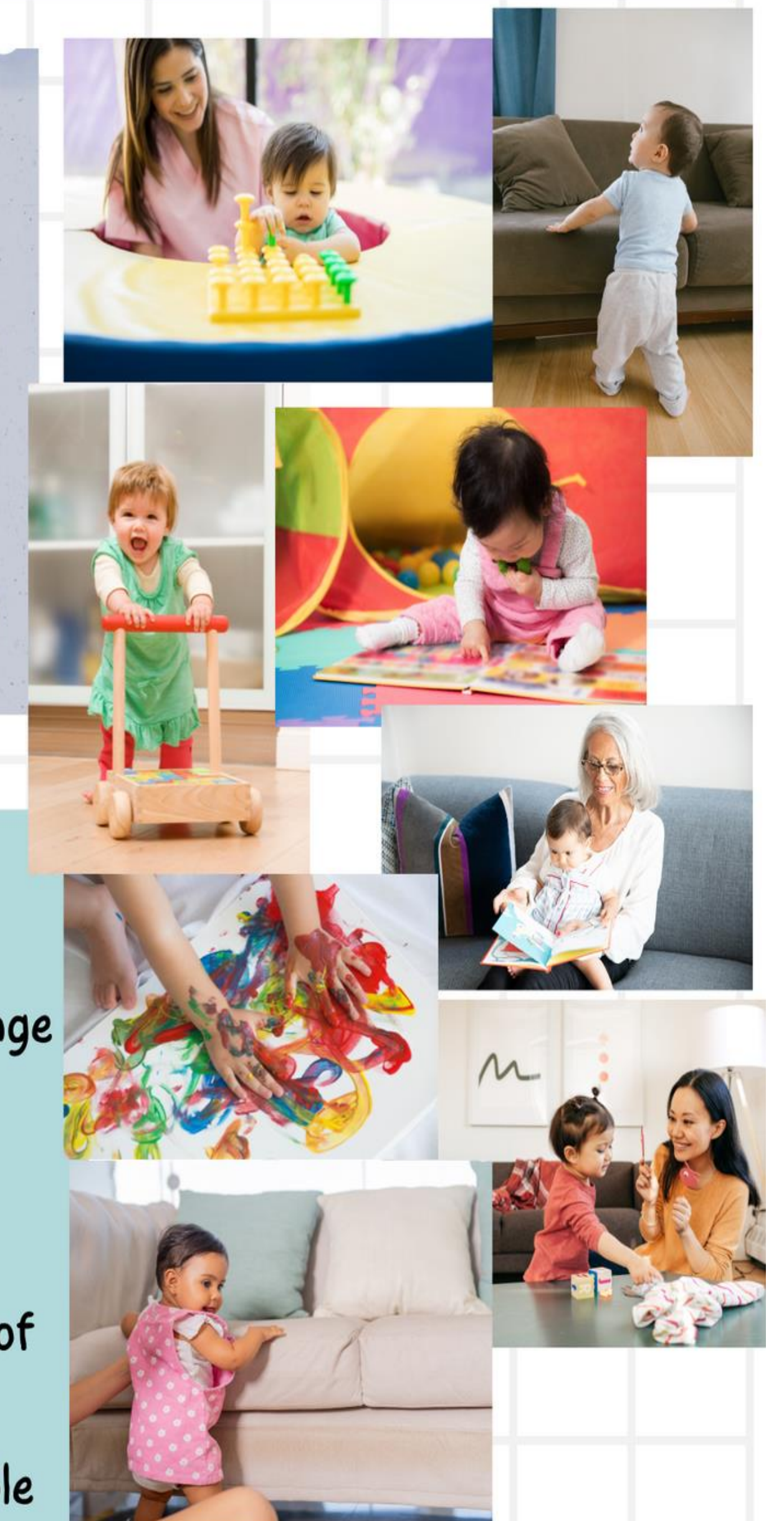
## PLAY DEVELOPMENT MILESTONE 9-12 MONTHS

### Developmental focus:

- Mobility (crawling, creeping)
- Grasping objects with thumb and index finger
- Pulling themselves to stand
- May cruise alongside furniture.

### Suggestions

- Push and pull toys encourage walking and mobility.
- Baby walkers do not help with walking and pose tipping hazards and risks of falls.
- Books with textures, simple stories to promote language development



#### Reference

American Academy of Pediatrics. (n.d.). Developmental milestones. Retrieved June 10, 2024,



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# Outcomes:

## Healthy Sleep Patterns + Food Introduction

### Handout and Webinars

### Using Evidence-based Knowledge on Baby's Sleep Patterns to Promote Infant Well Being and Parental Confidence in the First Year of Life

**Importance of understanding baby's sleep patterns:**


- Promoting babies' healthy growth and development
- Enhancing parental confidence and reducing anxiety
- Establishing routines that support better sleep for the entire family

**Typical sleep patterns:**

Age	Sleep duration	Sleep cycles	Frequent feeding
Newborn (0-1 month)	14-17 hours a day	45-60 minutes	Every 2-3 hours
1-3 months	14-17 hours a day	60-90 minutes	Every 3-4 hours
4-6 months	12-16 hours a day	60-90 minutes	Every 3-4 hours
6-8 months	12-15 hours a day	90 minutes	Every 4-5 hours
9-12 months	12-15 hours a day	90 minutes	Every 4-5 hours

**Additional information:**

- It's normal for newborns and babies to have more frequent night wakings and feedings to support growth.
- Cultural practices around sleep and bed sharing vary.
- Ensure safety guidelines are followed if bed sharing is practiced.
- Select a method that aligns with your parenting philosophy, and your baby's needs.
- Study said babies between 0-3 months should not have a strict bedtime as their schedules are primarily determined by feeding needs.



**Safe sleep practices and environmental factors:**

- The American Academy of Pediatrics (AAP) recommended to place your baby in a crib or bassinet for sleep to reduce the risk of Sudden Infant Death Syndrome (SIDS).
- Transfer a sleeping baby from a swing or car seat to a crib or bassinet as soon as possible.
- Swaddle babies with arms free around 2 months to promote healthy hip development and reduce SIDS risk.
- Common sleep props include swings, pacifiers, rocking, and feeding to sleep; avoid over-reliance to help babies self-soothe.
- Encourage self-soothing to allow babies to fall back asleep independently during the night.
- Avoid letting your baby fall asleep with a bottle to minimize choking hazards and ear infections.
- Create a dark and comfortable sleep environment for better sleep quality.
- Use a pacifier during nap time and bedtime to help reduce SIDS risk, but be mindful of potential dental and ear issues.
- White noise may help infants sleep, but more research is needed on its effectiveness and safety.

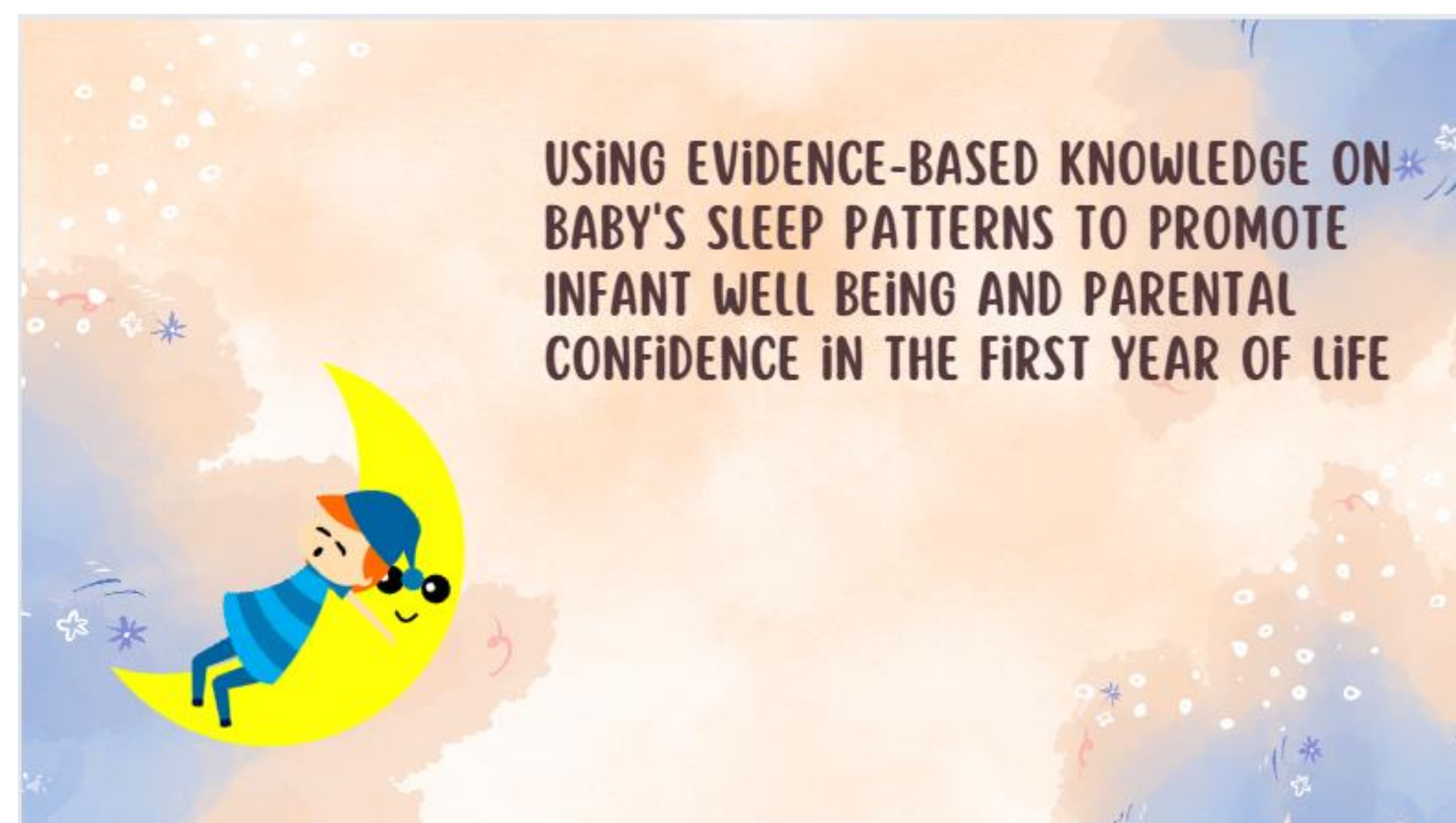
**Enhancing maternal mental health:**

- After birth, maternal hormonal shifts can affect mothers' sleep patterns, emotional well-being. Brain structures also adapt to prioritize baby's needs over maternal sleep.
- Prioritize self-care, including nutrition and adequate rest
- Seek support from family, friends, or support group
- Consider professional help if feeling overwhelmed or experiencing persistent mood changes

**Benefits of a bedtime routine:**

- Bedtime routines often include:
  - Bath
  - Reading
  - Singing
  - Gentle play
- Creating a bedtime routine for a baby aged 4 to 8 months can stimulate cognitive development and strengthen the parent-child bond.
- A consistent bedtime routine helps
  - Promote better sleep habits,
  - Provides a sense of security and predictability
  - Improve overall sleep quality.
- Engaging in calming activities before bed helps reduce overstimulation and promotes a smoother transition to sleep.
- Establishing consistent pre-sleep activities helps the baby associate these activities with sleep, making it easier to fall asleep independently.

**References**



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# Discussion

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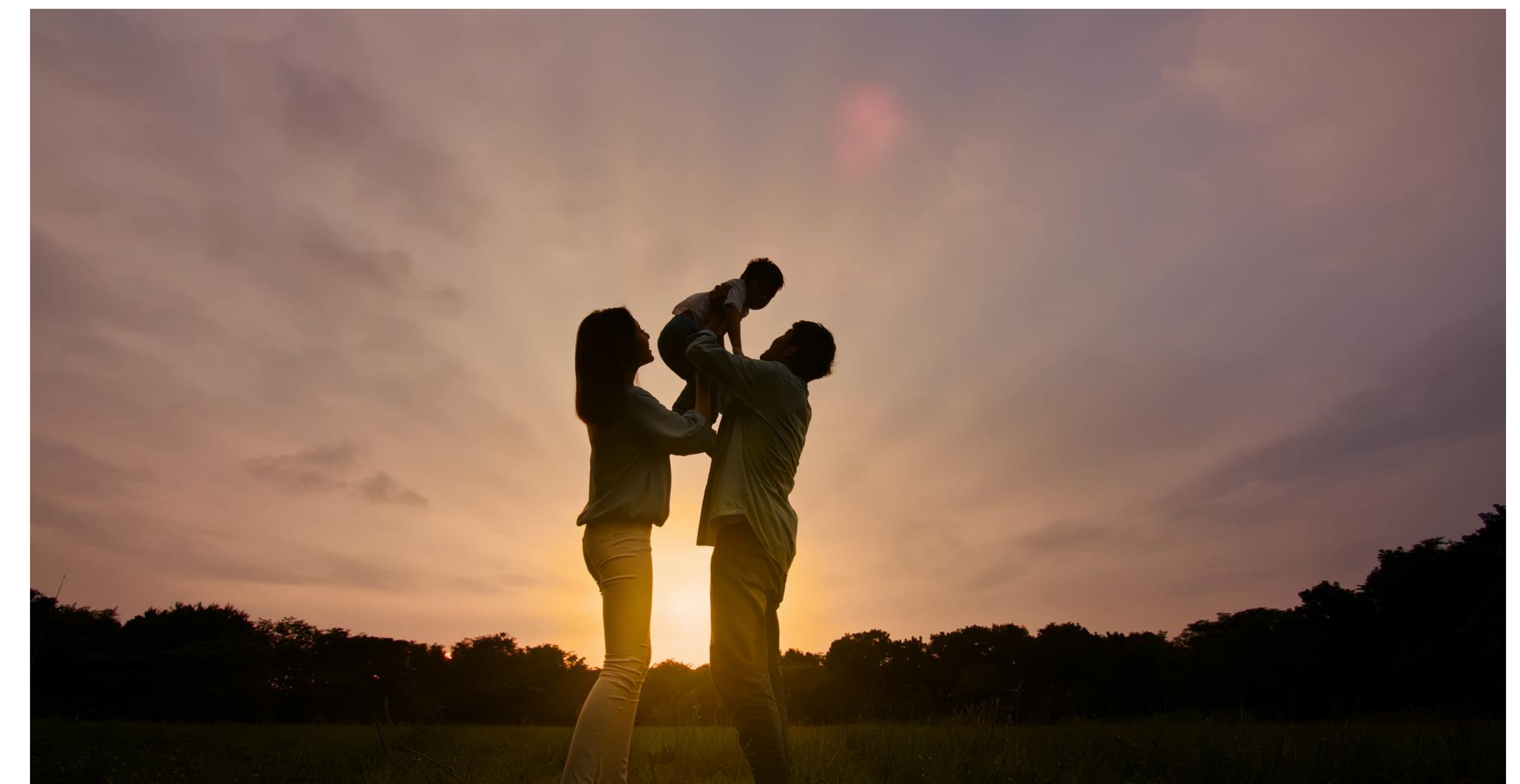
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# Impact

- Empowers parents with knowledge and confidence
- Promotes healthy development and age appropriate:
  - Healthy sleep patterns
  - Play activities
  - Sensorimotor activities
- Helps reduce parental anxiety and maternal mental challenges



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# Future Implications



- Future OTD students to continue working with the company
- Providing webinars to parents, and pediatricians
- Collaborating with other healthcare professionals (speech language pathologists, physical therapists) to create more educational materials.



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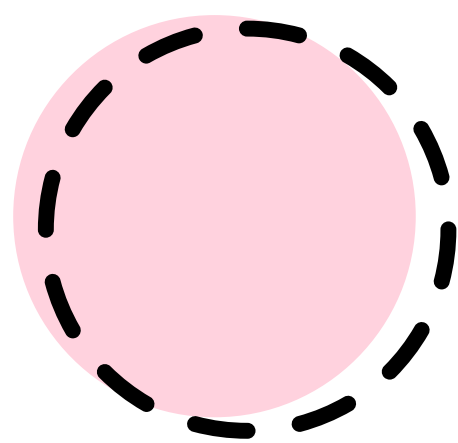
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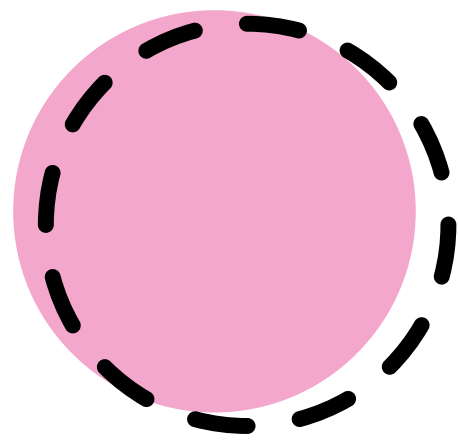
# Acknowledgements

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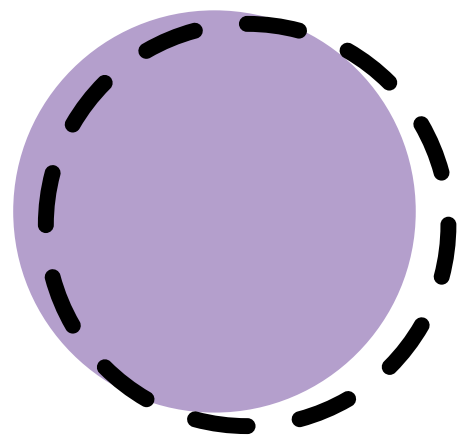
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you!*



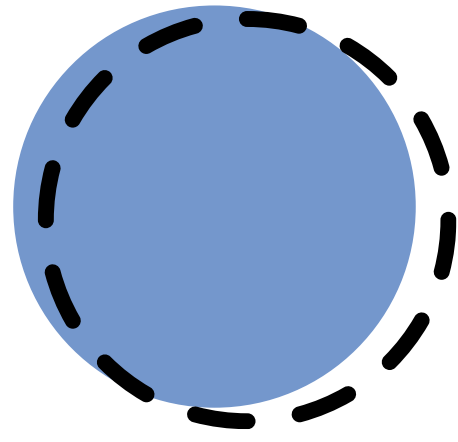
Capstone Site Mentor: Noelle Haight, OTR/L



UOP Mentor: Felicia Markfield, OTD, OTR/L



My family, Cohort 24



My husband, Jeremy Najera, and Avery Najera



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