

Early-Parenting Perception and Performance Scale (EPPS®)

Introduction

The purpose of the EPPS is to provide a tool that will allow parents and allied professionals to gain (1) an accurate measure of a parent's perception of his/her performance while carrying out tasks associated with caring for their hospitalized infant. In addition, it allows for the NICU professional to (2) objectively measure parent performance based on the level of assistance needed by the parent during each of these activities, (3) an objective and accurate measure of a parent's self-efficacy in performing tasks associated with caring for their hospitalized infant.

Design

The assessment was designed with both a parent and professional scale to gain an accurate measure of parent self-efficacy to help: (1) parents become comfortable, confident, and competent throughout each stage of the length of stay, ultimately leading to a greater level of independence in caring for their infant upon discharge from the hospital; and (2) to assist NICU professionals in developing an individualized, organized, and developmentally progressive care giving treatment plan for families during their time in the hospital.

What is the EPPS?

The EPPS has two components intended to measure overall parent perception and performance. One component measures parent perception of task performance and one component measures the professional's assessment of the parent's task performance. A 5-point rating scale is used to correlate with a statement of task. The statements range from 1 (high) to 5, (low) level of performance. Once the ratings are entered on the form, by writing them in the spaces provided, it is easy to determine any discrepancies between perception and performance.

The scale contains developmentally progressive categories of early parenting tasks which include: *"Interacting with Baby," "Early Caregiving," "Moving Baby,"* and, *"Caring for Baby."* Within each category is a set of specific tasks that relate to that area of parenting. Blank spaces have been provided in the "Other" category to allow the professional and parent to add additional tasks that may be individualized to the infant-parent dyad. While this assessment was designed with a developmental progression, it does not need to be administered in a specific format or trajectory, as it was designed to be utilized for the specific needs of each NICU professional, infant, and family.

Parent Scale

The EPPS “Parent Scale” is a self-rating scale (written at a 5th grade reading level) to be completed by the parent(s) and measures their self-perception of overall independence in performing early parenting tasks. Parents are asked to respond to the following statement “I believe I can perform this task by myself” with a verbal statement of (1) strongly agree; (2) agree; (3) neutral/I don’t know; (4) disagree; (5) strongly disagree.

The assessment also includes a visual 5-point scale that pictures a progression of emoticons representing the written numerical scale, with 1, picturing a high feeling of independence, to 5, picturing a low feeling of independence with the task. This visual scale may be used at any time to accompany the assessment and to make it easier for the parent(s) to complete the assessment.

Professional Scale

The EPPS “Professional Scale” is a rating scale to be completed by the professional and measures the overall ability of the parent to perform these specific tasks based on the level of assistance needed/provided during the performance of the task. The scale is to be completed on the basis of every day interactions/interventions with the family, and no special tests or questions are included as a part of this assessment.

The purpose of having both the parent and the professional components of the scale is to allow the professional to assess the consistency of rating between the two in order to further identify where the parent may need specific intervention/assistance.

Population

This scale was developed for consideration of infants admitted to the Newborn Intensive Care Unit (NICU).

Administration

This multi-disciplinary tool is intended to be utilized upon admission and throughout the infant’s hospital stay to measure progress of either or both of the parent’s perception(s) and their ability to understand/perform each parenting task.

The EPPS can be administered by any NICU professional who is directly involved in working with the infant and family to increase the engagement and overall performance of the co-occupational tasks listed in the EPPS.

There is no administration manual for the EPPS scale as it was designed to be a quick assessment tool that can be used during daily parent-infant activities to gain an accurate measure of overall performance and parental perception of caregiving tasks. It should be utilized as often as necessary to gain results which will assist the NICU professional in designing intervention approaches and treatments that will lead to increased caregiving independence by the parent(s).

Underlying Assumptions

- Neuroprotection and nurturing are foundational principles for all parenting tasks.
- Each infant communicates in his/her unique way via the neurobehavioral system.
- The infant's neurobehavioral system is assessed pre/during/post activity in order to respond appropriately and/or grade the task, so that the infant's safety risks are minimized.
- Family centered or family-driven care is practiced and encouraged.
- Family-driven care always respects the culture and beliefs of the family of origin considering the family's individual needs as it relates to the infant in order to positively impact neurodevelopmental outcomes.
- Anticipatory guidance is provided at each professional/parent encounter.
- Co-occupation is foundational. Meaning, facilitation of bonding and connection between the parent(s) and the infant is embraced with any and all activity.
- Teaching of activities is graded/adjusted based upon parent(s) learning style, language, and education level.
- Caregiving activities are performed with intentional support to all of the infant's sensory and motor systems.

EPPS Definitions

Interacting with baby

Therapeutic Touching

Therapeutic touch provides a human touch that is gentle, age-appropriate and recognizes engagement as well as disengagement cues based on that infant's individual needs. This type of touch recognizes that the infant needs a gentle approach when touch is initiated in order to prepare the infant's neurobehavioral systems. This kind of touch can be further described as preparatory. Once the touch has been initiated and the infant communicates cues of engagement, the caregiver strives for continuous touch. Continuous touch avoids on and off touch, and uses touch techniques that are intending to be the least stressful as possible. Therapeutic touch does not use light, feather-like touch or abrupt touch, as this can disrupt and disorganize the infant. Typically, therapeutic touch uses the whole palm of the hand, with full contact. Therapeutic touch respects disengagement cues demonstrated by the infant, and if necessary, touch is gently discontinued and re-initiated at another time.

Understanding Behavioral Cues

Infants communicate in subtle ways and understanding the signs of approach or avoidance can assist the caregiver in anticipating how to best intervene. Infant behavioral cues are unique to the individual and suggest that the infant is in a constant state of achieving homeostasis. Approach signals that communicate the infant may be ready for additional interaction include: quiet alert state, relaxed/soft face, smooth movements, "ooh" face, stable heart rate, respiratory rate and oxygen saturation. Avoidance signs that may communicate the infant's attempt to reduce their own stress level include: hand claspings, foot bracing, hands-to-mouth or face, sucking, grasping, and/or transitioning to a drowsy state. Signs that may communicate the infant may need a time out or discontinue the activity/stimulus include: grimacing, finger splay, stop sign, hiccups, gagging, sneezing, spitting up, yawning, arching, fussing, crying, averting gaze, arm/leg extension, and/or changes in physiological status.

Hand Swaddling

Hand swaddling provides an infant with flexion, containment, alignment and comfort as a means of facilitating self-regulation in the infant. In general, the infant's extremities are flexed and contained close to the trunk using the caregiver's hands. With a gentle touch and approach (see Therapeutic Touch), the caregiver can provide this intervention as a means of support and may include allowing the infant to grasp with their hands, as well as foot brace for additional self-regulation.

Skin-to-Skin Care

Skin-to-skin care (Kangaroo Care) is provided by placing an infant, wearing a diaper only, directly on the parent's bare chest. The parent is seated in a comfortable position, with feet either elevated or flat on the floor or stool. Parent is instructed, prior to infant being placed on chest, to be prepared to be in the skin-to-skin, seated position for at least one hour. This minimum of one hour is in order to allow infant to enter at least one cycle of deep sleep.

Early Caregiving

Taking Temperature

Providing slow, contained and supportive care is emphasized while gentle movements of extremities are utilized during taking of the infant's temperature. Taking temperature can be stressful and to avoid undue stress one should include therapeutic touch techniques and responses to individual cues. Hand swaddling may be utilized in conjunction with taking axillary temperature.

Promoting Non-nutritive suck

Non-nutritive suck (NNS) is a neurodevelopmental skill of the infant that entails sucking on a pacifier, finger or thumb to promote sucking without milk for nutrition. NNS can be provided to infants on respiratory support, including intubation and ventilation. Care should be taken to choose the appropriate size pacifier for the infant. NNS is also described as alternating periods of short sucking bursts and pauses with a rate of two sucks per second. The ratio of suck to swallow is six to eight sucks per swallow. NNS may occur spontaneously or with a stimulus such as a pacifier.

Promote Calming

Promote calming occurs when the caregiver understands the infant and their individualized behaviors expressed in the autonomic, motor and state systems. This approach requires caregiver attention at all times, to recognize the behaviors in order to respond and anticipate how to intervene. Understanding the interaction of the environment moment-by-moment on the infant's systems is crucial in knowing how to respond to a stress signal. Environmental modifications such as adjusting lights, sound or other types of noxious sensory input are just a few ways to promote calming in the infant. Teaching parents how to recognize state stress or levels of alertness helps the infant avoid stress in the subsequent systems. Age-appropriate calming is required to avoid excessive rocking, patting, talking or moving the infant. Additional calming techniques include NNS, hand swaddling, and therapeutic touch.

Therapeutic Handling

Therapeutic handling is slow, gentle and supportive while providing a tucked or flexed posture with movements that facilitate self-regulation. Self-regulation includes modulation of the autonomic, motor and state systems and is not disruptive, abrupt, quick or rough. Therapeutic handling has an intention of respect for the infant as an individual. Therapeutic handling is always initiated with a preparatory touch and a gentle soothing voice in order to prepare the sensory system for movement. Movements may be graded to occur as the infant tolerates.

Therapeutic Diapering

Therapeutic diapering is the act of changing the infant's diaper in a neurodevelopmentally and neurobehaviorally supportive fashion. An infant's autonomic and motor cues are assessed constantly in the pre/during/post stages of the activity. Time-outs combined with NNS, calming and hand swaddling may be provided to maintain and promote organization throughout the entire activity. Upper extremity containment is provided either through hand swaddling or positioning equipment throughout the diapering and cleaning process. Touch should be preparatory and continuous in nature (see Therapeutic Touching). Diapering supplies are gathered and prepared prior to entering the bed space in order to avoid on/off touch and minimize disturbing the infant. Minimal pelvic lifting to place a clean diaper under an unopened soiled diaper is preferred, with hips remaining below the head to avoid autonomic changes or stress. No pulling or tugging on feet and ankles to lift the pelvis. Avoid over-cinching and provide slow, firm and gentle pressure to remove waste from skin areas. Appropriate sized diapers should be considered and used based on age, weight and medical needs of the infant.

Swaddling

Swaddling refers to a blanket being wrapped around an infant, in order to provide neutral warmth, boundaries and proprioceptive input. In addition to calming, swaddling provides therapeutic positioning, depending on age of the infant. Swaddling is performed with the shoulders supported and slightly rounded forwards. The elbows are flexed and the hands are close to midline, so that the hands are near the mouth, and the infant can attempt to self-regulate through NNS on the thumbs or fingers. The lower extremities are swaddled in a flexed position with the hips in a somewhat abducted manner, and there should be enough room in the lower portion of the blanket swaddle for the infant to move lower extremities. Care should be taken to avoid an internal rotation and extended position of the hips, as this can lead to femoral head issues. This manner of swaddling is referred to as "hip healthy swaddling".

Moving Baby

Therapeutic Positioning

Positioning is therapeutic when the caregiver implements the concepts similar to those found in the intra-uterine environment. Positioning should be age-appropriate while supporting sleep and homeostasis. Therapeutic positioning also takes into consideration the infant's neuromotor, musculoskeletal and sensory systems as well as supports the neurobehavioral systems. In general, therapeutic positioning includes: head in midline, neck in soft flexion or neutral, shoulders rounded and forward, hands at midline, arms and legs flexed, trunk rounded with hips flexed (posterior pelvic tilt) and opportunities for dynamic (versus static) movement within the boundaries provided. Containment is generally 360 degrees and allows for medical equipment, caregiver access and emergent care. Therapeutic positioning also allows for self-regulation such as sucking, grasping and bracing. This approach recognizes and respects skin integrity, alignment of joints, and enhance postural alignment.

Therapeutic Holding

Therapeutic holding often redefines "holding the baby" for the parents of the medically fragile infant. Therapeutic holding includes holding in the bed space, in the arms of the caregiver or anywhere else the infant may be placed (warmer, scale). It encompasses slow, gentle movements with containment and postural alignment to avoid undue stress. This technique is often used during gavage feeding, in order to promote a nurturing and safe feeding experience. This approach recognizes the individual medical needs of the infant and includes age-appropriate touch and interaction with the ability to recognize behavioral cues.

Therapeutic Transferring

Therapeutic transferring is the ability to move an infant (or transfer) from point "A" to point "B" in a slow, gentle, calculated fashion while providing therapeutic handling (See Therapeutic Handling). This approach takes into consideration the infant's medical equipment and plans ahead to avoid tugging, pulling or inadvertent removing of tubes/lines. This type of transfer avoids excessive vestibular input to the immature sensory system. All supplies/items are gathered and placed nearby prior to the transfer. A therapeutic transfer is one that is intentional and requires planning and/or a second person for assistance. For the intubated infant, non-verbal and quiet verbal communication is required.

Caring for Baby

Breastfeeding

Breastfeeding, as the preferred route of oral feeding, requires a supportive approach where the healthcare professional partners with the family to assist with milk collection, storage, feeding and transition to home. This approach recognizes the infant's readiness cues and assesses the quality of feeding while respecting that each infant is unique and exhibits their own set of neurobehavioral cues. A comprehensive, multi-disciplinary approach is suggested and possible areas of education include the following: pumping, milk storage, cleaning supplies, readiness, positioning the infant, appropriate use of equipment (nipple shield, pillow), assisting with latch, environmental modification, appropriate handling/holding, recognizing and responding to stress cues and knowing when to disengage. Breastfeeding should be safe, nurturing, and developmentally appropriate.

Bottle Feeding

Bottle feeding is a complex task that requires reciprocity between the parent and the infant. Bottle feeding should be safe, nurturing, and developmentally appropriate. An "infant-driven feeding" (Ludwig & Waitzman 2007) approach places the infant at the center of the activity. This approach recognizes the infant's readiness cues, quality of feeding and caregiver strategies while respecting that each infant is unique and exhibits their own set of neurobehavioral cues. A comprehensive, multi-disciplinary approach is recommended and possible areas of education include the following: understanding and recognizing readiness cues, environmental modification, understanding suck/ swallow/breath sequence, selecting an appropriate bottle/nipple, external pacing, burping, swaddling, positioning, appropriate handling/holding, recognizing /responding to stress cues and knowing when to disengage.

Dressing

Dressing should be a supported parenting activity when the infant achieves thermal regulation or if the professional feels the task is appropriate. Gentle, slow movements and attention to the joints and skin should be considered. Dressing should not include pulling on arms or legs or abrupt changes in posture or position. Excessive head lag is to be avoided. Special attention should be given to infants with genetic predispositions to joint laxities and subluxations. In addition, infants with skin integrity issues will need particular caregiver focus in order to avoid shearing of skin in the donning/doffing process. In infants with poor skin quality or compromise, wrinkles of clothing/bedding against the skin and tight elastic bands are to be avoided, and should be checked frequently. Overdressing should be avoided to prevent overheating as well as underdressing to prevent the infant from becoming cold.

Swaddled Bathing

A swaddled bath is one that uses swaddling techniques by loosely wrapping a cloth around the infant prior to/during a tub or sponge bath. The swaddled infant is placed in a tub of warm water and immersed to the shoulder level. The infant's shoulders and head are supported at all times. One arm is gently unwrapped and washed with soap, then rinsed and re-swaddled. Then, the same is repeated with the other arm. Each leg is unswaddled, washed with soap, then rinsed and re-swaddled, one at a time. The neck, chest, abdomen, back and diaper areas are washed next. When the bath is complete, gently and carefully unswaddle the infant from the wet cloth (leave cloth in tub), remove infant from the tub and place on a warm dry blanket for drying and dressing. By providing containment, support and facilitating a calm and relaxed bathing experience, the family can enjoy bathing their hospitalized infant.

Therapeutic Massage

Therapeutic massage is slow, steady, rhythmical and contained touch incorporating age-appropriate massage strokes observant and supportive of the infant's neurobehavioral and sensory systems. Therapeutic massage incorporates developmental principals while providing appropriate touch, handling, movement and positioning. It is to be understood that therapeutic neonatal massage differs from the general population "infant" massage. Therapeutic massage is taught to parents based on infant's age, medical status and tolerance and should be under the guidance of a trained and/or certified professional.

Social Interacting

Social interacting is recognized as a developmental milestone for the infant who is near term, medically stable and exhibits homeostasis of the autonomic, motor, state, and attention/interaction systems. This infant can engage for brief periods with eye contact without stress signs or averting gaze. Teaching the parent age-appropriate social interaction and recognition of cues is essential for building communication and understanding when to approach or avoid the infant during purposeful activities.

Supporting Sleep

Supporting sleep or restfulness is defined by age-appropriate care that recognizes the importance of sleep on the developing brain. This approach respects the infant's sleep-wake states and schedules caregiving accordingly. Families are educated on the importance of supporting sleep by providing environmental modifications and other means to support sleep, such as non-nutritive sucking, swaddling, gentle touch, and skin-to-skin care are encouraged. Staff is expected to model a restful environment with attention to noise, lights, and other environmental factors that may interrupt sleep.

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