The following are a selection of publications from late 2019 to early 2020 relevant to NIDCAP.

2019


The implementation of a massage therapy and kinesitherapy protocol is beneficial for the anthropometric development of hospitalized preterm infants. An easy to administer and cost-effective intervention such as massage therapy and kinesitherapy can improve the anthropometric development of preterm infants and reduce growth-related morbidity in the short, medium, and long term.


This cross-sectional study was conducted on 149 nurses working in the NICUs across Iran. Three questionnaires were used to collect demographic data and to explore the nurses’ perceptions and knowledge of the NIDCAP program. The results of this study showed that the majority of nurses participating in the study had high knowledge about NIDCAP.


The neurodevelopment of a convenience sample of high-risk infants following cardiac surgery but before hospital discharge were evaluated using an adaptation of the Newborn Behavioral Observation. At discharge, postoperative infants with CHD had impairments in autonomic, motor, attention, and state regulation following cardiac surgery. Findings suggest that neurodevelopmental follow-up and intervention should begin early in infancy.


To determine the comparative efficacy of developmental care versus standard care for reducing pain and stress in preterm infants during examinations for retinopathy of prematurity (ROP). Since the results show the benefits of developmental care in an ROP examination, it can be the practical evidence basis by which to develop a standard of procedure or guideline for clinical practice.


The application of a systematic approach to improve practice is considered the most effective strategy for implementing neuroprotective developmentally supportive care. The content of this paper incorporates evidence-based systematic reviews to guide clinicians in the application of developmentally supportive interventions.


The aim of the study was to explore the lived experiences of NICU nurses on implementing FCC. This study provided deeper understanding about nurses’ perceptions of FCC implementation. In Muslim developing countries, FCC implementation is challenging and nurses are under extra pressure because of a shortage in nursing workforce; however, having positive experiences with family participation and valuing their beliefs allowed them to support family involvement.

The purpose of this study was to measure the effectiveness of a developmental positioning intervention on length of stay, weight gain, and tone/flexion compared with neonates without structured positioning. With greater structure and consistent attention to developmental positioning, outcomes are positively affected. Further research with larger sample sizes will identify stronger associations and relationships between positioning and outcome measures.


This study found that professional efficacy had the largest influence on developmental care practice, followed by perception of developmental care, and a task-oriented organizational culture. Clinical and educational experience regarding developmental care and working environment was not associated with developmental care practice. A practical training program should be provided to nurses to promote confidence in implementing developmental care for preterm infants.


To evaluate the effect of a NICU parent education program on parents’ early language and literacy practices, and on their confidence interpreting and responding to infant signals. The program significantly increased intention to engage in more early language and literacy practices, and increased parent-reported knowledge of how and when to interact with their infants. The majority of interviewed parents reported engaging in these practices one to two weeks later.


A multilayered approach to supporting parents of infants born preterm in the NICU is recommended, with evidence specifically for including layers of individual psychological and psychosocial support, peer-to-peer support, and family centered care. Consideration of fathers in the NICU, and areas for future research are also discussed.

2020


To date, 34 infants have been enrolled in a randomized controlled trial (RCT) testing the effectiveness of reducing sound levels that reach the infants’ ears in the NICU. Based on the small sample size of this single trial, no recommendations were made for clinical practice. Larger, well designed, conducted and reported trials are needed.


Although early developmental interventions vary widely in focus, timing, and mode of delivery, evidence generally supports the effectiveness of these programs to improve specific outcomes for children born very preterm and their families. However, little is known about mechanisms for effectiveness, cost- and long-term effectiveness, which programs might work better for whom, and how to provide early intervention services equitably. This information is critical to facilitate systematic integration of effective developmental interventions into clinical care for infants born very preterm and their families.


Responses were assessed using an observational sheet based on Als’ Synactive Theory of Development. Autonomic and motor responses were scored according to five-point Likert scales. Effects of weighing/bathing execution sequence and post menstrual age (PMA) on autonomic and motor response scores were analyzed by linear multiple regression analysis. The real-time recognition of adaptive/maladaptive responses allows nurses to personalize their approach to preterm infants, taking into account PMA and adjusting the appropriate sequence of execution of weighing/bathing nursing procedures.


The study shows that Supported Diagonal Flexion (SDF) positioning creates more opportunities for mother-infant communication during SSC. SDF positioning fosters a greater multimodal
temporal proximity, thus supporting a more qualitative mother-infant communication.


Reassurance is a priority for fathers of neonates in a surgical NICU, particularly regarding infant pain management and comfort. It is important that health-care professionals provide reliable, honest information and open-access visiting. Notably, fathers seek greater recognition of their role in the NICU, beyond being the ‘other’ parent.


This article provides retrospective audit data of a developmental round intervention in the surgical neonatal intensive care unit with a focus on data over four years to highlight key areas, including the structure and process, recommended educational standards for team members, and parental engagement, as key markers for developmental round efficacy. Future research should focus on the link between the developmental round intervention and long-term neonatal outcomes.


Very low birthweight infants from 66 NICUs in Germany were enrolled in this multicenter study. 1493 questionnaires were completed by 1277 parents. The existence of unrestricted visiting hours and standardized procedures for developmentally supportive care were positively associated with parental satisfaction. Fostering the parent–infant interaction through the provision of developmentally supportive care and unrestricted visiting hours for parents whose infants are hospitalized within an NICU significantly contributes to the satisfaction of parents.


As with neonatal development, the field of infant mental health continues to evolve. Another current trend is the development of evidence-based models of both prevention and therapeutic intervention for infants and very young children, including direct parent support and interventions to strengthen the parent-child relationship. The field of infant and young child mental health has also embraced the importance of collaboration with other professionals and service systems.


A collaborative learning approach was used to stratify, assess, and compare individualized developmental care practices among multidisciplinary teams at six pediatric heart centers. The collaborative findings were a first step toward strategies to quantify and measure developmental care practices in the cardiac intensive care unit to assess the association of complex inpatient practices with long-term neurodevelopmental outcomes.


The implementation of family-centered care (FCC) in the neonatal intensive care unit in Iran is shaped by the health care provider, cultural, legal and operational challenges. Organizational, managerial and operational changes are required for FCC implementation. Nurses and physicians are well-positioned as leaders and facilitators of family-centered care implementation within the neonatal intensive care unit.


One additional study enrolling 38 participants was included in this update, for a total of nine studies reporting on 544 infants. Results from one additional study strengthen our findings that cycled lighting (CL) versus continuous bright light shortens length of stay, as does CL versus near darkness (ND). The quality of the evidence on both comparisons for this outcome according to GRADE was low. Future research should focus on comparing CL versus ND.

Analyses of questionnaires from the French national cohort study of preterm neonates, EPIPAGE-2. Perceived Maternal Information on Infants’ Pain (PMIP) was derived from mothers’ answers to questions about information perceived on both pain assessment and management. Mothers reporting PMIP as “sufficient” were more frequently present and more likely comforting their child during painful procedures. Factors independently associated with “sufficient” PMIP were high maternal education, gestational age <29 weeks, daily maternal visits, perception of high team support, and implementation of the newborn individualized developmental care and assessment program.


To explore differences in maternal mental health and infant neurobehavioral outcome among infants who received and did not receive the Supporting and Enhancing NICU Sensory Experiences (SENSE) program. Preliminary evidence demonstrates improvements in maternal confidence and infant neurobehavioral performance following SENSE implementation.


Current evidence suggests that developmental care in NICU settings could have significant effects on mental and motor development of preterm infants, especially at 12 months of age. However, because of clinical heterogeneity, more studies are needed to evaluate the effects of developmental NICU care in the development of preterm infants.