

Category: Nursing issues

Study type: Quantitative study - other

Author's declarative title: Exploring the Need for Educational Intervention and Sustained Support of Neonatal Nurses to Improve Care and Outcomes of Preterm Infants Transitioning to Oral Feeding: A Commentary

Commentary on: Hendy et al. Assessing neonatal nurses: transitioning preterm infants to oral feeding - a multicenter cross-sectional study.

Commentary

Implications for practice and research

- Enhancing neonatal oral feeding care requires structural training, mentorship, and interdisciplinary collaboration to improve competence and outcomes.
- Research should explore long-term impact of educational interventions, cross-setting comparisons, and barriers to effective practice, including cultural, staffing, and technological influences.

Context

Preterm birth represents a critical global health challenge, impacting approximately 13.4 million infants annually worldwide, with rates ranging from 4-16% across countries and standing at 7.9% in the United Kingdom.[1,2] Globally, 40-70% of preterm infants experience oral feeding (OFe) difficulties, contributing to increased healthcare burden and developmental concerns.[3] While high-income countries achieve higher preterm survival rates through consistent access to life-saving neonatal interventions,[1] resource-limited settings face systemic disparities in nursing training and evidence-based feeding practices, exacerbating morbidity risks in regions with high preterm burdens.[1,3]

Hendy et al present a comprehensive evaluation of nursing competency in OFe transition within Egypt, where preterm births account for 10% of live births.[3] The study highlights a critical gap in understanding workforce preparedness for a high-stake clinical milestone, potential impacting healthcare outcomes and costs.[3]

Methods

A descriptive, quantitative, multicentre cross-sectional study was conducted across 16 Egyptian hospitals (November 2023-March 2024).[3] A convenience sample of 553 nurses from neonatal intensive care units (NICUs), each with at least one year of experience in preterm care, was recruited. A pilot study involving 10% of the sample assessed tools' clarity, feasibility, and applicability; these participants were excluded from analysis. Data were collected using a validated self-administered questionnaire, assessing knowledge and attitudes, and an observational checklist, evaluating practices. Knowledge domains included oro-motor function, suck-swallow-breathe coordination, and nonnutritive sucking, with $\geq 80\%$ indicating satisfactory performance. Data were analysed using SPSS v22. Descriptive statistics summarised participant characteristics; Spearman's rank correlation assessed relationships among knowledge, attitudes, and practices. Binary logistic regression identified predictors of satisfactory total practice, including variables such as age, education, and nurse-to-neonate ratios. Practice was dichotomised as satisfactory/unsatisfactory. Model performance was assessed using the receiver operating characteristic curve, with its area under the curve (AUC) indicating predictive accuracy.

Findings

Among the 553 nurses surveyed, 55.7% were female. Participants had a mean age of 33.67 years and an average of 10.37 years' NICU experience.[3] Overall, 64.6% demonstrated unsatisfactory knowledge regarding the transition to OFe in preterm infants, particularly in oro-motor function (72.7%), suck-swallow-breathe coordination (73.6%), and nonnutritive sucking (67.6%). Additionally, 58.6%

reported unsatisfactory practices, and 45% held a negative attitude. Significant positive correlations were found between knowledge, practice, and attitude scores (knowledge-practice: $r=0.260$, knowledge-attitude: $r=0.215$, practice-attitude: $r=0.156$; $p<0.001$), indicating that higher scores in one domain were associated with higher scores in the others. Binary logistic regression identified higher education, part-time employment, and positive attitudes as significant predictors of satisfactory practice. Model performance indicated good discriminatory performance ($AUC\approx 0.76$), with statistical significance ($p<0.05$).

Commentary

Hendy et al's study exposes alarming deficiencies in neonatal nurses' knowledge and practices regarding preterm infant OFe transitions.[3] While it highlights crucial workforce competency gaps, methodological concerns limit broader applicability. The study benefits from a large sample size and comprehensive assessment framework.[3] However, its cross-sectional design precludes causal inferences about knowledge deficits and clinical outcomes.[3] Additionally, direct observations via checklist may introduce Hawthorne effects, potentially overestimating nursing competency.

Targeted educational interventions, however, demonstrate measurable improvements. Beissel et al's four-month nurse training programme, emphasising infant-cue-based approaches and oro-motor stimulation, demonstrated significant improvements in OFe outcomes.[4] Similarly, Pakistani quasi-experimental research revealed that structured oro-motor training increased competent practices from 0% to 91.6%, significantly shortening the transition to OFe.[5] These findings directly address the deficiency identified by Hendy et al, highlighting the need for systematic, evidence-based training to enhance neonatal care and reduce preventable delays in feeding progression.[3]

The persistent disconnect between evidence-based practices and their clinical application reflects deeper structural problems, including fragmented access to

continuing education and reliance on informal, inconsistent training.[6] Without sustained investment in comprehensive, competency-driven programmes, these deficits will undermine neonatal outcomes and exacerbate health disparities across care environments. Isolated educational initiatives, while beneficial, cannot address systemic workforce preparation inadequacies. Comprehensive strategies integrating structured training programmes, ongoing mentorship, and interdisciplinary collaboration are needed to strengthen competencies and improve outcomes. Furthermore, future research should assess the sustained impact of these interventions, compare effectiveness across settings, and investigate the multifaced barriers that hinder optimal practice.

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Competing interests

The authors have no competing interests. This editorial reflects the views of the author(s) at the time of writing and not necessarily those of the University of Deby, Chesterfield Royal Hospital NHS Foundation Trust or any other affiliated organisation.