

# Evaluating Clinical Practice Change for Neonatal Opioid Withdrawal: Psychometric Testing of the Eat Sleep Console Nurse Questionnaire

Michelle D. Slymon, DNP, RN, CPNP-PC, CLC; Heather McGrane Minton, PhD; Tara L. Sacco, PhD, RN, CCRN, ACCNS-AG



## BACKGROUND

The Eat Sleep Console (ESC) care model for the management of neonatal opioid withdrawal, or neonatal abstinence syndrome (NAS), has resulted in improved newborn outcomes including reduced hospital length of stay, neonatal intensive care unit admissions, and amount of replacement opioid received.

- A process and outcomes evaluation was conducted at a Baby-Friendly hospital after implementing ESC.
- The Eat Sleep Console Nurse Questionnaire (ESCNQ) was distributed to postpartum and neonatal intensive care unit (NICU) nurses to assess:
  - Knowledge, attitudes, and perceptions
  - Confidence with the practice change to ESC
  - Nurses' adherence to ESC processes of care
- Face validity was established for the ESCNQ.
- Further reliability testing of the ESCNQ was needed.

## PURPOSE

To conduct reliability testing of the Eat Sleep Console Nurse Questionnaire (ESCNQ)

## METHODS

- The original project evaluated the practice change through a cross-sectional questionnaire distributed to postpartum and NICU nurses (n=52) caring for infants with NAS using ESC.
  - Questions measured nurses' knowledge, attitudes, and perceptions of care from a previous tool (Romisher et al., 2018).
  - Additional questions measured nurses' confidence with the practice change and fidelity to the processes of ESC (Slymon et al., 2023).
- In this secondary analysis, the psychometric testing of the tool was conducted using Cronbach's  $\alpha$  and correlational analysis.

## Psychometric Properties for Outcomes Measured

Outcome	Cronbach's $\alpha$ or Pearson's $r$	Sample ESCNQ Item
<b>Knowledge</b> (n=4)	0.512	I know how to appropriately document the care I provide to infants with NAS.
<b>Attitudes</b> (n=6)	0.199	When interacting with a mother of an infant with NAS, I consider the potential circumstances surrounding her drug use.
<b>Perceptions</b> (n=2)	$r = 0.671, p < 0.001$	I feel my unit has created an appropriate environment to care for infants with NAS and their families.
<b>Processes of Care 1</b> (n=4)	0.774	When providing care for infants with NAS, how often do you provide parent education on NAS?
<b>Processes of Care 2</b> (n=4)	0.793	When providing care for infants with NAS, how often do you routinely provide a quiet environment?
<b>Processes of Care 3</b> (n=6)	0.777	When providing care for infants with NAS, how often do you routinely provide empowering messages to mothers (caregivers)?
<b>Confidence</b> (n=2)	0.524	When providing care for infants with NAS, how much confidence do you have providing education to mothers (caregivers) on the importance of nonpharmacologic care for their infant?

*Eat Sleep Console Nurse Questionnaire (ESCNQ); Neonatal Abstinence Syndrome (NAS). Knowledge, Attitudes & Perceptions questions used with permission (Romisher et al., 2018) Acknowledgements: Dr. Xiaomei Cong for prior work in the development of some of the survey items; Drs. Pam Herendeen, Alison Simpson, & Suzanne Mullin for their guidance with the original ESCNQ development.*

## RESULTS

Internal consistency was not demonstrated for the full scale ( $\alpha=0.655, n=28$  items) and three of the five subscales (Knowledge, Attitudes, and Confidence).

- Perception items were positively, strongly, and significantly associated.
- Cronbach's  $\alpha$  showed good internal consistency for the full Fidelity to Processes of Care subscale and its three subscales.
- Pearson's correlations were analyzed for the Confidence subscale.
  - Confidence items 1 and 2 were positively, moderately, and significantly associated.
  - Confidence item 3 was not significantly correlated with either of the other two Confidence items.

## DISCUSSION

- The ESCNQ is a new tool originally developed for a quality improvement (QI) project. Findings from this analysis are mixed with some subscales and items performing well.
- Further study to evaluate psychometric properties and revise this tool is a necessary next step in establishing validity and reliability.
- Content validity analysis should be undertaken with a larger number of respondents from a variety of regions
  - Revision to the subscales and overall tool may be warranted.
- Establishing a reliable tool to evaluate processes and outcomes of the implementation of ESC allows healthcare teams to understand and target areas of continued QI in the care of infants with neonatal opioid withdrawal.

