Competency Training for the Level II Special Care Nursery

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BACKGROUND

All neonates birth to 12 months of age can be considered medically fragile. Neonatal Care Units are broken down into four levels (I, II, III, IV) of care and all levels appropriately require advanced training for physical, occupational, and speech therapists; however, training and education opportunities are limited for therapists interested in neonatal practice and education has historically been inconsistent, non-standardized, and unstructured.

Rationale for this project is a) an obligation for experts in the field to create structured, consistent, relevant and accessible education and training and b) consider different levels of education and training to support different levels of neonatal care. The evidence-based project included an online learning module for advanced clinical therapists specific to the Level II Special Care Nursery (SCN) setting. A 2-hour learning module provided structured and relevant information for advanced therapists to improve knowledge and competency for practice in a level II SCN. A quantitative pre-post-questionnaire design was used to confirm and strengthen the multivariable correlation(s) between a) education and knowledge and b) education and competency for safe, proficient, and effective care to preterm and fragile infants housed in Level II SCNs.

PIO QUESTION

Does an education module for advanced clinical therapists improve knowledge and competency for neonatal therapy practice in the Level II Special Care Nursery (SCN) setting?

METHODS

- Participants are advanced therapists with 3-5+ years experience.
- The 2-hour education module included 12 interactive video lectures created on Adobe Spark and was presented to participants using the learning management system (LMS) Teach:able.
- Content included a) SCN environment and equipment b) unit culture c) the interdisciplinary team d) typical and atypical development e) vulnerable infants typically treated in a SCN f) infant pain and stress g) ADLs and co-occupations h) infant drive and cue-based feeding approaches i) models, theory, FOR, and clinical reasoning j) discharge education, community support, and follow-up.
- Pre-and-post-education questionnaires, included 7 closed or fixed response and 1 open ended question, were completed online and returned via email to the project coordinator.
- Five advanced therapists, each with 10 to 20 years of NICU practice experience assisted to provide internal content validity for pre- post-survey instrumentation.
- External validity was obtained through a) replication of the education module and b) surveys remaining consistent and without change between participants.
- Reliability procured through a) implementation of one consistent education module b) one tester or surveyor and c) motivation of subjects as seen by the project's particular and detailed focus.

LITERATURE REVIEW

The role of the neonatal therapist in the Neonatal Intensive Care Unit (NICU) is powerful, essential, and appropriately considered advanced practice by major rehabilitative/habilitative professional organizations (AOTA, APTA, ASHA, and NANT).

Unfortunately, specialized training and education have historically been limited and furthermore, methods for training deemed inadequate, inconsistent, and non-structured (Dewire, 1996).

Official documents of AOTA including the Occupational Therapy Practice Framework: Domain and Process, 4th Edition (2020), Vergara et al.'s paper on Specialized Knowledge, Skills for Occupational Therapy Practice in the Neonatal Intensive Care Unit (2014), and Standards of Competence (2015) provide outlines, guidelines, and recommendations to support entry-level neonatal practice in the NICU; however, no standardization.

Millet (2014), and Mosqueda-Pena et al. (2015) indicate education and training programs are successful and a positive transfer of knowledge and skill to practice can be accomplished.

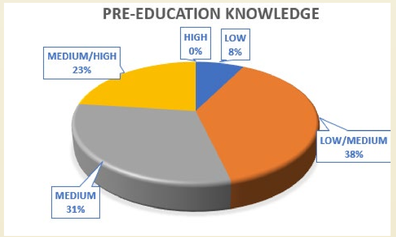
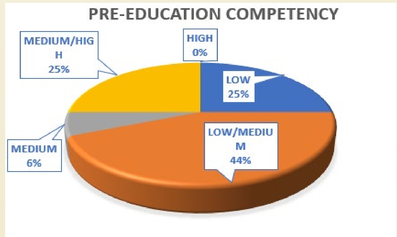


Figure A



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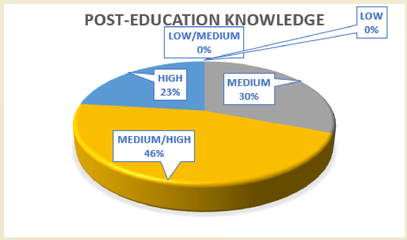

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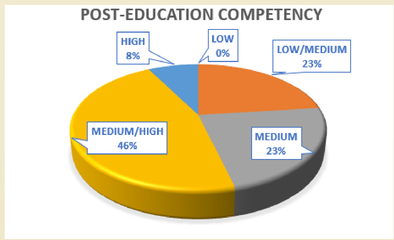

Figure D

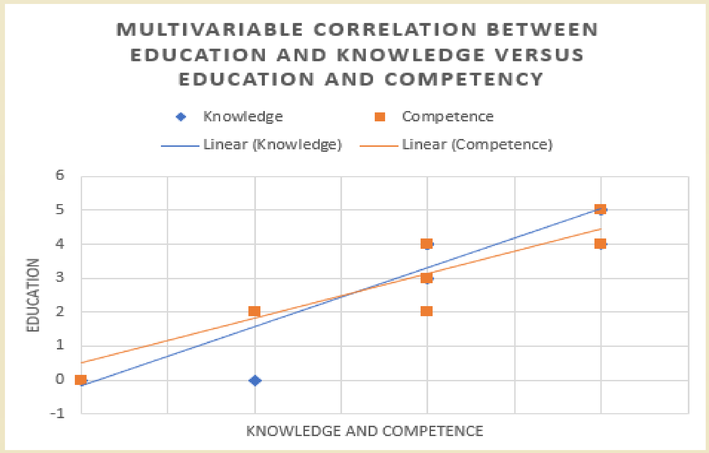

Figure E

RESULTS and SUMMARY

Of the 13 participants,

- 46% of therapists self-rated knowledge low prior to course completion
- 69% self-rated improved knowledge medium to high following course completion

In comparison,

- 69% of therapists self-rated competency low prior to course completion
- 54% felt their competency improved medium and/or high
- 100% of participants support observation, mentorship, and/or preceptor roles.

Four 3D pie charts visualize and illustrate pre-post education

- **Figure A** = pre-education knowledge
- **Figure B =** pre-education competency
- **Figure C =** post-education knowledge
- **Figure D =** post-education competency

While **Figure E** illustrates the multivariable correlation between a) education and knowledge and b) education and competency for practice in the Level II neonatal setting.

Limitations and considerations for this study include a small sample size resulting in scant correlation. Additionally, self-rating relating to one's knowledge before and after education can be considered subjective, responsible and forthright; however, self-rating related to competency for safe practice is limited due to possible inflated, unreliable, obsolete, or insufficient perception.

Neonatal care in a Level II SCN differs greatly from Level III and IV units. As the level of neonatal care differs; clinical experience, knowledge, skills, and competency will differ; therefore, training should adapt to accommodate and serve different levels of care. Currently, this separation does not exist and more, special care nurseries can be underserved when we do not consider cross-training advanced therapists. It is imperative that we, as experts, contribute to better define, develop, and create levels of training specific to levels of neonatal care, including mentorship and/or preceptor models. It is our obligation, not only to create a standardized approach for training but impose initial and ongoing standard competency assessment tools with objective standards for all levels of neonatal care. All of which should be recognized by our highly respected national organizations, and I would be honored to represent occupational therapy practice with my contribution.

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