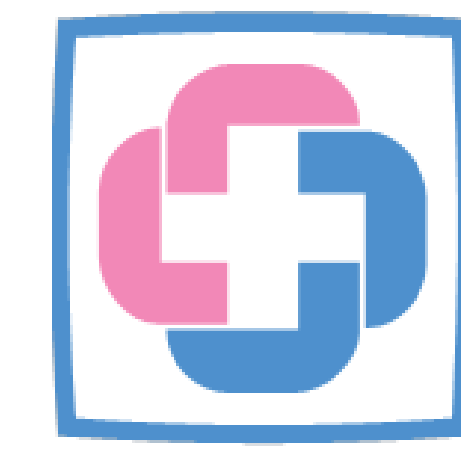




Singapore Healthcare Management 2016

Nursing Management of Hyperinsulinemic Hypoglycaemia Neonates

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Introduction

Hypoglycaemia is a common neonatal metabolic disorder with an incidence of 1.3 to 4.4 in 1000 term births and 15 to 55 in 1000 preterm births. It is a serious cause of morbidity in the neonatal period as prolonged or severe hypoglycaemia can lead to adverse complications such as seizures, neurological damage and developmental delay. Hence, it is pertinent that health care professionals are educated on glucose metabolism in neonates.

Nurses are in ideal positions to promptly recognize the signs and symptoms of hypoglycaemia, especially in the newborn nursery, neonatal intensive care unit, or primary care units. Early recognition and prompt treatment to achieve normoglycaemia are essential to preserve normal brain development and prevent potentially catastrophic or lifelong complications for the newborn and family.

Aims

1. To explore the perspectives of neonatal nurses in terms of self-perceived adequacy of knowledge, confidence and competency towards the management of hyperinsulinemic hypoglycaemia (HH) neonates before and after an educational talk
2. To evaluate the benefits of an educational talk as an educational strategy

Method

Quantitative, Quasi-Experimental Study

- 62 nurses in Special Care Nursery participated in this study

Data collection

- Over 3 occasions: before an educational talk by an expert, immediately post-talk & 3 weeks after the talk
- Using demographics sheet, Neonatal Nurse's Self-Assessment of Knowledge, Confidence and Competency towards Management of Neonatal HH Questionnaire and neonatal HH quiz

Data Analysis

- Descriptive statistics and paired-T tests were used

Clinical Significance

Guide improvement strategies that focus on:

1. Improving nurses' level of knowledge, confidence and competency towards the management of neonatal HH
2. Addressing nurses' misconceptions towards HH, correct administration of glucose gel, safe use of Diazoxide and its side effects
3. Equipping nurses with the expertise to provide appropriate pre-discharge counselling for HH neonates
4. Develop educational strategies to promote ongoing education for both existing nurses & new nurses (videos, step-by-step guidelines, interactive educational programs using IT)

Results

- ❖ Approximately **15% increase in nurses' knowledge scores** immediately post educational talk, which was highly statistically significant ($T=5.8, p<0.01$)
- ❖ No significant difference was found between knowledge and quiz scores immediately post educational talk and scores at 3 weeks post educational talk, indicating that the **knowledge gained was enduring**
- ❖ There was an approximately **20% significant increase in nurses' competency scores** immediately after the educational talk ($T=3.77, p<0.01$)

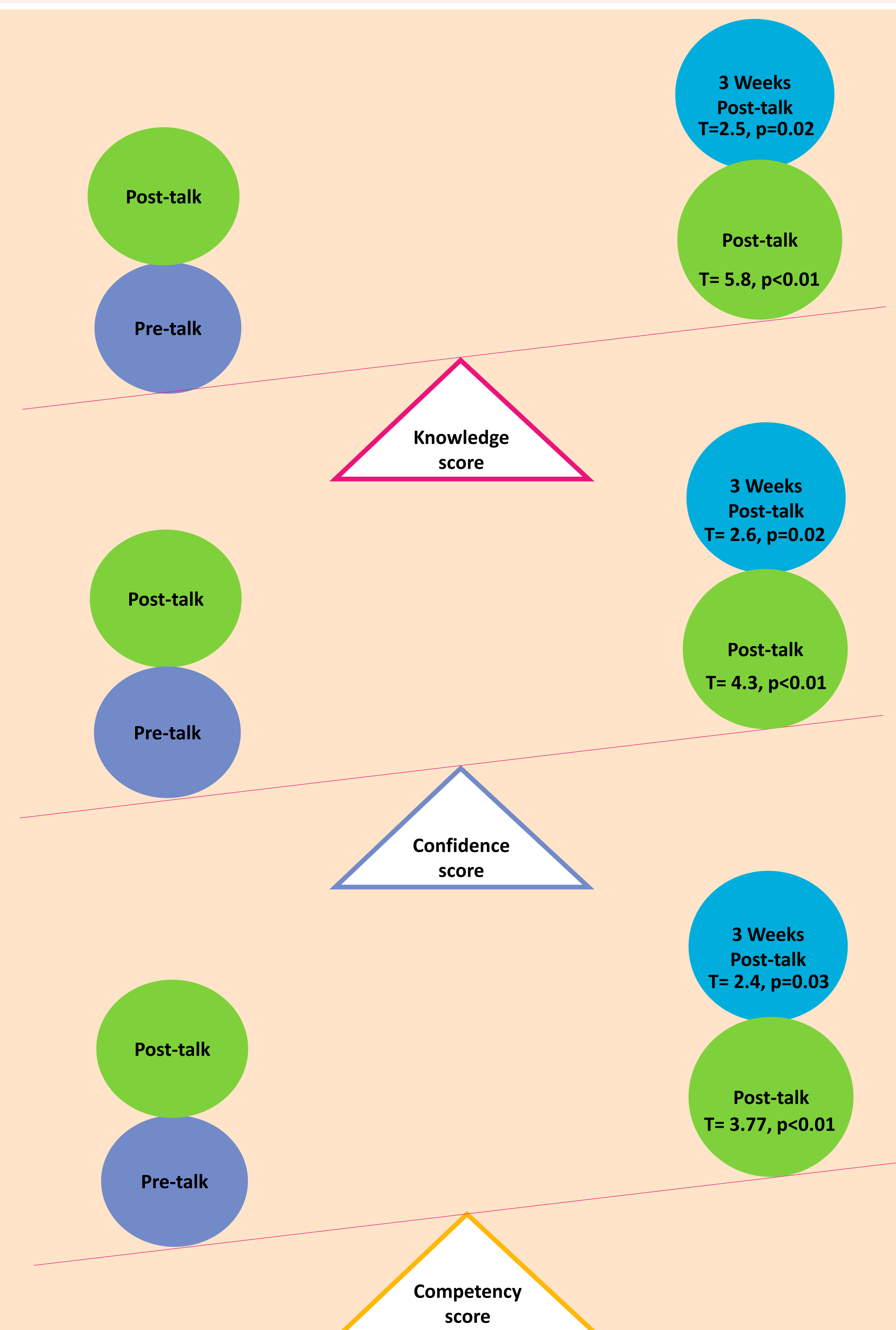


Figure 1. Comparing Knowledge, Confidence and Competency scores pre-talk, post-talk and 3 weeks post-talk using paired-T test

Conclusion

Results provide health care professionals a deeper understanding of neonatal nurses' perception of knowledge, confidence and competency towards the management of neonates with HH

Highlighted the areas that neonatal nurses lacked understanding in

Results of this study support the use of an educational talk for knowledge dissemination to nurses

Educational talk also proved useful in providing information in a manner that aided nurse's retention of knowledge across time