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ENVIRONMENTAL FACTORS, SENSORY MODULATION AND DEVELOPMENT OF PRETERM INFANTS IN THE NEONATAL HIGH CARE UNIT

Abstract

This study aimed to determine the association between preterm infant demographics and their sensory modulation; and to describe a link between the Neonatal High Care Unit (NHCU) environmental factors, sensory modulation and development of premature infants born in Edenvale General Hospital. The NHCU was assessed using the Implementation of Neurodevelopmental Supportive Care (INDeSC) checklist and 48 observations were conducted over a period of six-months. Twenty-two preterm infants participated in the study. Sensory modulation for the infants was determined using the Infant Sensory Profile™ 2 (ISP 2) at 4 weeks post discharge and again at 3-6 months (corrected age). The Bayley Scales of Infant Development – 3rd Edition® (Bayley-III) was used to determine their developmental age.

The INDeSC checklist indicated most criteria, suggested to simulate a uterine-like environment, which was not adhered to in the NHCU. This may have influenced the infants' sensory modulation. At 4 weeks post discharge, just under sixty percent of the infants presented with sensory modulation difficulties (SMD) related to over responsivity. No trend could be found for the scores on the ISP 2 and the Bayley-lll, when the scores for each infant were compared at age 3-6 months (corrected age). All the infants, who returned, however, presented with a risk for SMD as well as developmental delay.

This study highlights the importance of on-going monitoring of the development and sensory modulation of infants who are born prematurely. The lack of adherence to criteria for simulating a uterine-like environment within the NHCU/NICU can further affect early development.

By Nicole Paul