Relationship between Energy Expenditure and Stress Behaviors of Preterm Infants in the Neonatal Intensive Care Unit

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Background:

Neonatal stress increases energy expenditure and may affect the outcomes of healing, recovery from illness, and growth. The behavioral cues are routinely used to monitor infant's stress levels. Behaviors are infants' only means of communicating their needs and responses to their environment, and they may be closely correlated to increasing energy expenditure during periods of environmental stress. However, there is little research to validate this assumption.

Aim:

This research evaluated the relationship between behaviors and energy expenditure in preterm infants receiving nursing interventions.

Methods:

This study was an explorative secondary data analysis from a previous study. The current study investigated energy expenditure calculated using Heart-based Energy Expenditure-estimate (HR-based EE-estimate).

Results:

Research results indicate that preterm infants expend more energy when they show the following seven behaviors: grimace, sucking, diffusion squirm, fist, gape face, salute, and sneezing.

Practice Implications:

The interventions during this critical medical time should be flexible, according to infant's stress behaviors and conditions of energy expenditure.

Key words:

Preterm Infants, Energy Expenditure, Behaviors, Nursing Interventions

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