

## Review Paper:

# The Effect of Developmental Care on Neurobehavioral Function and Health Promotion of Preterm Infants Hospitalized in Neonatal Intensive Care Units



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## ABSTRACT

**Background:** Despite significant progress in medicine and increasing survival rate of preterm infants, these infants still suffer from abnormal development and neurobehavioral deficits. The present study aimed to investigate the effects of developmental care on neurobehavioral function and health promotion of preterm infants hospitalized at Neonatal Intensive Care Units (NICUs).

**Methods:** This study was a clinical trial conducted on 66 preterm infants hospitalized in NICU who were divided into three groups mother's presence (n=22), mother's voice (n=22) and nurse's voice (n=22) by convenience sampling technique. The respiratory rate of infants in all groups were recorded by the monitoring system in a 5-min interval for 30 minutes in three phases (10 minutes before, 10 minutes during, and 10 minutes after the intervention) within 3 consecutive days.

**Results:** In mother's voice group, the Mean±SD of respiratory rate (49.58±0.97) were higher during the intervention compared to its rate before (43.61±1.01) and after intervention (44.51±1.17) and this difference was significant ( $p < 0.001$ ). No statistically significant difference was found in respiratory rate between the three study groups ( $p = 0.039$ ).

**Conclusions:** Since mother's voice is effective on respiratory rate of preterm infants, respiratory status can be used for supportive care and as a coordinating stimulus to improve the neurobehavioral function and health of preterm infants. It is possible to take a step towards the development of neurons and promoting the health of preterm infants.

**Keywords:** Preterm Infant, Developmental care, Neonatal health promotion, Neurodevelopmental