

Effect of Multi-sensory Stimulation on Neuromuscular Development of Premature Infants: A Randomized Clinical Trial

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Abstract

Objectives: Preterm birth is considered as a risk factor for developmental disabilities, which can lead to long-term effects on the nervous system of children. The aim of this study was to determine the effect of multi-sensory stimulation on neurodevelopment of premature infants. **Materials and methods:** In this two-group double-blind clinical trial in Jahrom Hospital, Jahrom, Iran from Jun to Aug 2016, 80 preterm infants were randomly divided. The intervention group received multisensory stimulation for 12 min per session, 5 sessions per wk along with routine NICU care and the control group received ward's routine care. Neuromuscular maturity for each infant was assessed by New Ballard Score. Data were analyzed using independent t-test. **Results:** Based on ANOVA with repeated measures, New Ballard score significantly changed in the intervention group before and after intervention ($P=0.001$). This change was also significant in the control group ($P=0.04$). However, the changes in New Ballard score were significantly different before and after intervention between the two groups ($P=0.001$). **Conclusion:** Multi-sensory stimulation can have beneficial effects on the development of neuromuscular in premature infants