Abstract:

Purpose: The aim of this study was to identify the effect of massage, EMLA cream, and the combination of these two methods on changes in physiological indices because of pain caused by intravenous line insertion in preschool children.

Design: A four-group randomized nonblinded clinical trial with factorial design.

Methods: In total, 140 eligible 3- to 6-year-old children entered the study in Tabriz Children’s Hospital in 2017 and were randomly allocated to four groups (EMLA cream, massage, combination of the two, and control). Physiological responses were measured before and immediately after interventions in all groups. Data were collected and analyzed using SPSS version 19.

Findings: Comparison of the physiological indices changes caused by pain between groups showed that changes in children’s heart rate (HR) and respiratory rate (RR) in the EMLA group and in the combined-method group were statistically significant (P < .05). No significant differences were found in systolic blood pressure and oxygen saturation (SPo2) between the four groups.

Conclusions: Results indicated that EMLA cream was more effective than massage and a combination of EMLA and massage in reducing an increase in the HR and RR caused by pain in children. Massage alone was not effective in significantly lowering the children’s increased physiological indices such as the HR and RR, and it seems the effectiveness of massage is more noticeable in conjunction with EMLA cream.

Reference: