Abstract:

Objectives: This study was a randomized, controlled examination of the effect of the Buzzy device (MMJ Labs, LLC, Atlanta, GA, USA) in reducing pain during peripheral intravenous cannulation in children. The device uses a combination of highfrequency vibration and cold to block pain.

Methods: The study was conducted with 56 children aged 7-12 years who presented at the pediatric emergency department of Trakya University Health Center for Medical Research and Practice. Data were gathered using a family and child data collection form and the Wong-Baker FACES Pain Rating Scale (Wong-Baker FACES Foundation, Oklahoma City, OK, USA). A vein visualization tool was used in both groups for peripheral intravenous cannulation, and the Buzzy device was also used in the experimental group. The pain of the children was assessed by a nurse and the children. Descriptive statistics, the Wilcoxon t-test, the Mann-Whitney U test, and correlation analysis were used to evaluate the data. The results were evaluated at a 95% confidence interval and $p<0.05$ was accepted as the level of significance.

Results: The mean age of the children was 8.37±1.96 years and 58.9% were male. The mean pain score provided by the children in the experimental group was 3.40±3.56 and it was 3.76±3.06 in the control group. The mean pain score reported by the nurse for the experimental group was 4.53±3.44 and 3.76±2.73 for the control group. There was no significant difference between the pain scores reported by the children and the nurse according to group ($p<0.05$). However, there was a significant difference between the pain scores recorded by the nurse and the children ($p=0.034$).

Conclusion: The Buzzy device was not effective in reducing pain during intravenous cannulation. The level of pain reported by the nurse was higher than that described by the children. It is recommended that training on pain assessment and the use of distraction methods should be provided to nurses working in pediatric emergency departments.

Reference:

Semerci R, Kocaaslan EN, Akgün Kostak M, Akın N. Çocuklarda damar yolu açma işlemi sırasında oluşan ağrıyı azaltma: Buzzy uygulaması . Agri. 2020 Nov;32(4):177-185. Turkish. doi: 10.14744/agri.2020.02223. PMID: 33398861.