



Comparison of the effect of two different distraction methods on pain intensity during phlebotomy in children.

Mina Jouzi^{1*} 1- Nursing & Midwifery Sciences Development Research Center, Najafabad Branch, Islamic Azad University, Najafabad, Iran. Department of Nursing, Najafabad Branch, Islamic Azad University, Najafabad, Iran

Introduction: One of the most common medical procedure of hospitalized children is phlebotomy that often are considered as very painful with increased levels of pain-fear and distress. Until recently, many researches were done to assess the efficacy of different techniques on the relief of pain in children and predominant developments are given in the pediatric pain management. There are a wide range of non-pharmacologically based approaches for helping to manage a child's pain. Moreover several topical anesthetics are available for pediatric medical pain, but these are seldom used for phlebotomy due to their limitations. For example, for their high cost and also time that have to be on the skin in order to achieve dermal anesthesia. Because of the immediate and long-term negative outcomes of inadequate pediatric pain management, the goal of this research is to compare the effect of distraction and lidocaine cream on pain intensity during phlebotomy in children.

Methods: The study population consisted of 1-5 year-old children who hospitalized in Isfahan Shariati Hospital in 2016. These 75 children were randomized into three groups: the distraction (by kaleidoscope) (N=25), the lidocaine cream (N=25) and the control (N=25) groups. The methods of data collection are interview, observation and completion of checklist. The checklist included 2 parts: demographic data and "Children's Hospital of Eastern Ontario Pain Scale" (CHEOPS) that was scored according to observe the child's behavior (scored from 4 to 13). Finally, the results were analyzed by descriptive and analytical tests using SPSS software (Version 17).

Results: The mean of pain intensity was 9.16 ± 0.5 in distraction group, 8.56 ± 0.2 in lidocaine and 9.52 ± 0.3 in control group. According to one-way ANOVA test, no significant differences were found in pain intensity between 3 groups ($F=0.56$, $P=0.57$). Also there were no significant correlation between pain intensity and hospitalization time, sex and age.

Conclusion: Based on results, the pain intensity in lidocaine group was smaller than distraction and in these both group were smaller than control group, but this differences were not significant because of different causes. Distraction with kaleidoscope causes the attention of the child draw away from pain stimuli during a painful procedure based on the gate control theory of pain. Moreover topical anesthesia such as lidocaine cream was used for decreasing the pediatric pain in previous studies. Although the effect of lidocaine cream and distraction were not significant in decreasing the pain intensity because of different causes, but because these proposed interventions are low cost and low risk, with anecdotal reports of usefulness, it is proposed that this study would replicate with larger size of samples.

Keywords Pain, Pediatric, Distraction, Phlebotomy.