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Abstract:

Purpose: Venipuncture generates anxiety and pain in children. The primary aim of the study was to evaluate two non-pharmacological techniques, vibration combined with cryotherapeutic topical analgesia by means of the Buzzy® device and animated cartoons, in terms of pain and anxiety relief during venipuncture in children.

Designs and Methods: 150 children undergoing venipuncture were randomized into four groups: the ‘no method’ group, the Buzzy® device group, the animated cartoon group and the combination of Buzzy® and an animated cartoon group. Children’s pain and anxiety levels along with parents’ and nurses’ anxiety levels were evaluated by means of validated grading scales.

Results: Overall children’s pain increased less in the non-pharmacological intervention groups as compared to the group without intervention. Notably, the difference was statistically significant in the animated cartoon group for children’s perception of pain. Children’s anxiety

and parents' anxiety decreased more in non-pharmacological interventions groups as compared to the group without intervention.

**Conclusions:** The study showed the effectiveness of non-pharmacological methods of pain management during venipuncture. Notably, distraction with animated cartoons was superior in terms of children's perception of pain when compared to Buzzy®, and to the combination of cartoons and Buzzy®. Buzzy® was significantly effective at the secondary analysis for children younger than 9. Children's and parents' anxiety is decreased by non-pharmacological methods. Furthermore, nurses' involvement in pediatric care can be enhanced.

**Practice Implications:** Non-pharmacological methods of pain management during venipuncture represent an easy way to achieve an increased level of compliance among children and parents.

#### Reference:

Bergomi, P., Scudeller, L., Pintaldi, S. and Dal Molin, A. (2018) Efficacy of Non-pharmacological Methods of Pain Management in Children Undergoing Venipuncture in a Pediatric Outpatient Clinic: A Randomized Controlled Trial of Audiovisual Distraction and External Cold and Vibration. *Journal of Pediatric Nursing*. May 1st. .

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