

Understanding parents' perceptions of pain treatment at the CHEO Family Flu Clinic

Juliana Choueiry, BScN Student,¹ Jessica Reszel RN, MScN², Denise Harrison RN, PhD,^{1,2}
¹School of Nursing, University of Ottawa; ²Children's Hospital of Eastern Ontario



Introduction

Infant and childhood vaccinations are essential for protection from potentially harmful viruses. However, immunizations are painful and can result in fear and distress in infants and children.

For many parents, watching their child in pain and distress during a vaccination is stressful and can impact their decision to adhere to the recommended childhood vaccination schedule.

Thus, parents' perceptions of their child's pain and distress during vaccination is important to consider in order to promote adherence to the early childhood immunization schedule.

During its annual flu clinic, the Children's Hospital of Eastern Ontario (CHEO) welcomes CHEO staff and their families to receive their influenza vaccinations. In order to minimize children's pain and distress, evidence-based pain treatments are offered.

Aims

The purpose of this project was to ascertain parents' perceptions of:

- ❖ their child(ren)'s distress levels before, during, and after influenza vaccination, and
- ❖ the effectiveness of pain reducing interventions during influenza vaccination at the 2016 CHEO Family Flu Clinic.

Methodology

Recruitment: parents were invited to complete a brief survey after their children received influenza vaccination

Data collection: paper-based 8 question survey regarding (1) their child(ren)'s pain/distress before, during, and after vaccination, (2) pain treatment used, and (3) perceived effectiveness

Data entry: survey data entered into REDCap database

Data analysis: data analyzed in Excel using descriptive statistics

Results

❖ A total of 111 surveys were completed, reporting data on 219 children (representing a 70% response rate, as there were 311 children vaccinated at the clinic). Most children were between the ages of 3 and 12 years (Figure 1). Data on only 2 infants was collected. As this number of infants is too small to draw any conclusions, the results focus on the older age groups.

Parents perception of child(ren)'s level of distress (Figure 2):

- ❖ **Before:** 42% of children, 11% of toddlers and 6% of teens were distressed*.
- ❖ **During:** 41% of children, 52% of toddlers and 9% of teens were distressed*.
- ❖ **After:** the proportion of distressed children declined for all age groups. Teens were the least likely to be distressed overall.

*Children (n=158), Toddlers (n=27), Teens (n=32)

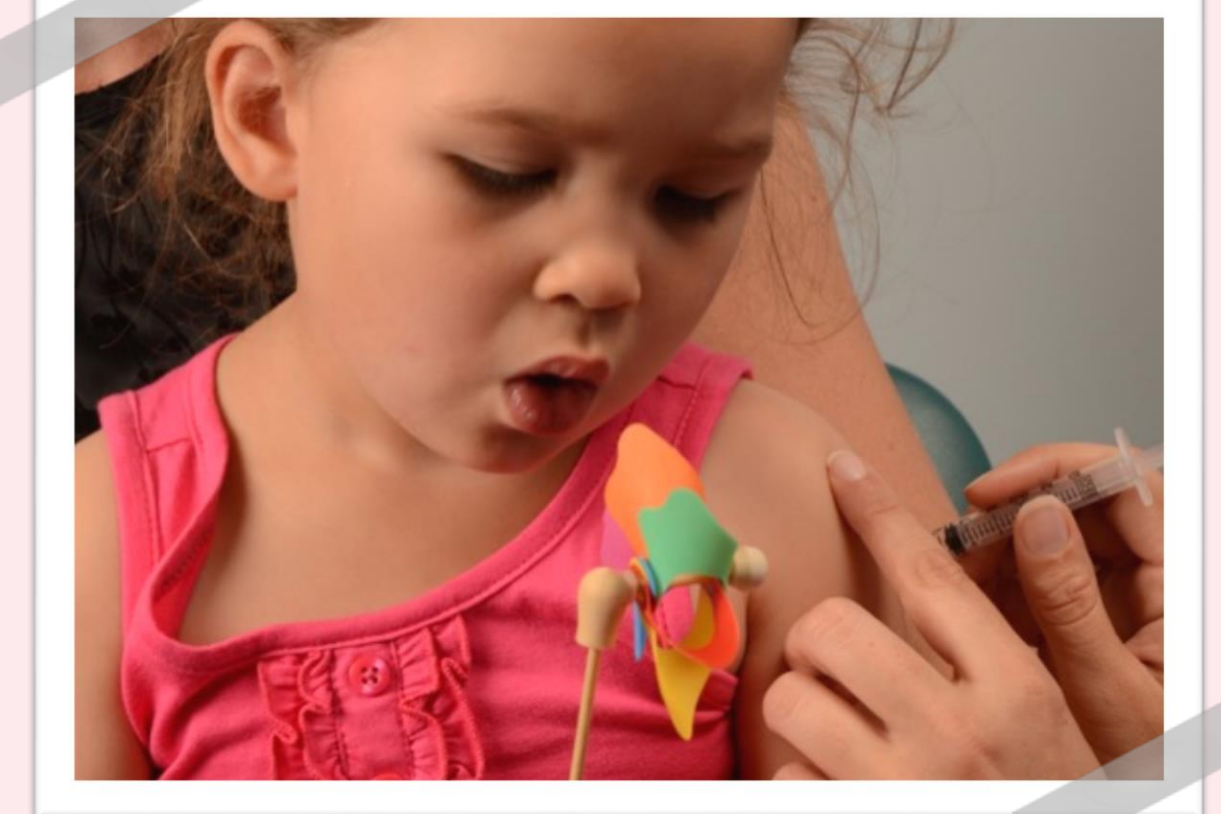
Pain treatment used by age group (Figure 3):

- ❖ **Toddlers:** distraction was most frequently used (60%), followed by the numbing spray** at 40%.
- ❖ **Children:** distraction and numbing spray were used most frequently (49% and 47%, respectively).
- ❖ **Teenagers:** most reported not receiving any pain treatment (81%).

Pain treatment that parent's perceived to be effective:

- ❖ Over half of all children (54%) received a pain treatment that was perceived to be either somewhat or very effective.
- ❖ Overall, distraction (44%) and numbing spray (41%) were the most frequently used pain treatment.
- ❖ A combined treatment of distraction and numbing spray for toddlers, children, and teens was perceived as effective by most parents (88%) (Figure 4).

**Topical anesthetic skin refrigerant (ethyl chloride) to control pain associated with injections.



Discussion

- ❖ 42% of children were distressed before the injection, representing a high proportion of anxiety and fear of needles.
- ❖ 41% of children and 52% of toddlers remained distressed during the injection. It is important to work on decreasing these proportions in order to promote minimally painful vaccinations and alleviate the association of pain and medical interventions.
- ❖ Results indicate that 22% of toddlers and 27% of children received no pain treatment, the age groups most likely to be distressed. Therefore, the team will aim to use effective knowledge translation strategies targeted at families and staff to promote consistent use of recommended pain treatment during influenza vaccination.
- ❖ This quality assurance study successfully captured data on 70% of children who attended the 2016 CHEO Family Flu Clinic. Reasons for this response rate might include:
 - ❑ The flu clinic also offers small, quiet rooms with one-to-one support for more anxious children. Some children were not captured in our survey results due to receiving their vaccination outside of the large public room;
 - ❑ Some parents may not have waited the 15 minutes in the large room where surveys were being distributed.

Conclusion

The results of this survey will inform both the planning of appropriate resources and interventions for future vaccination clinics and the planning of a study for the 2017 CHEO Family Flu Clinic.

Acknowledgements

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FIGURE 1. AGE OF CHILDREN (N=219)

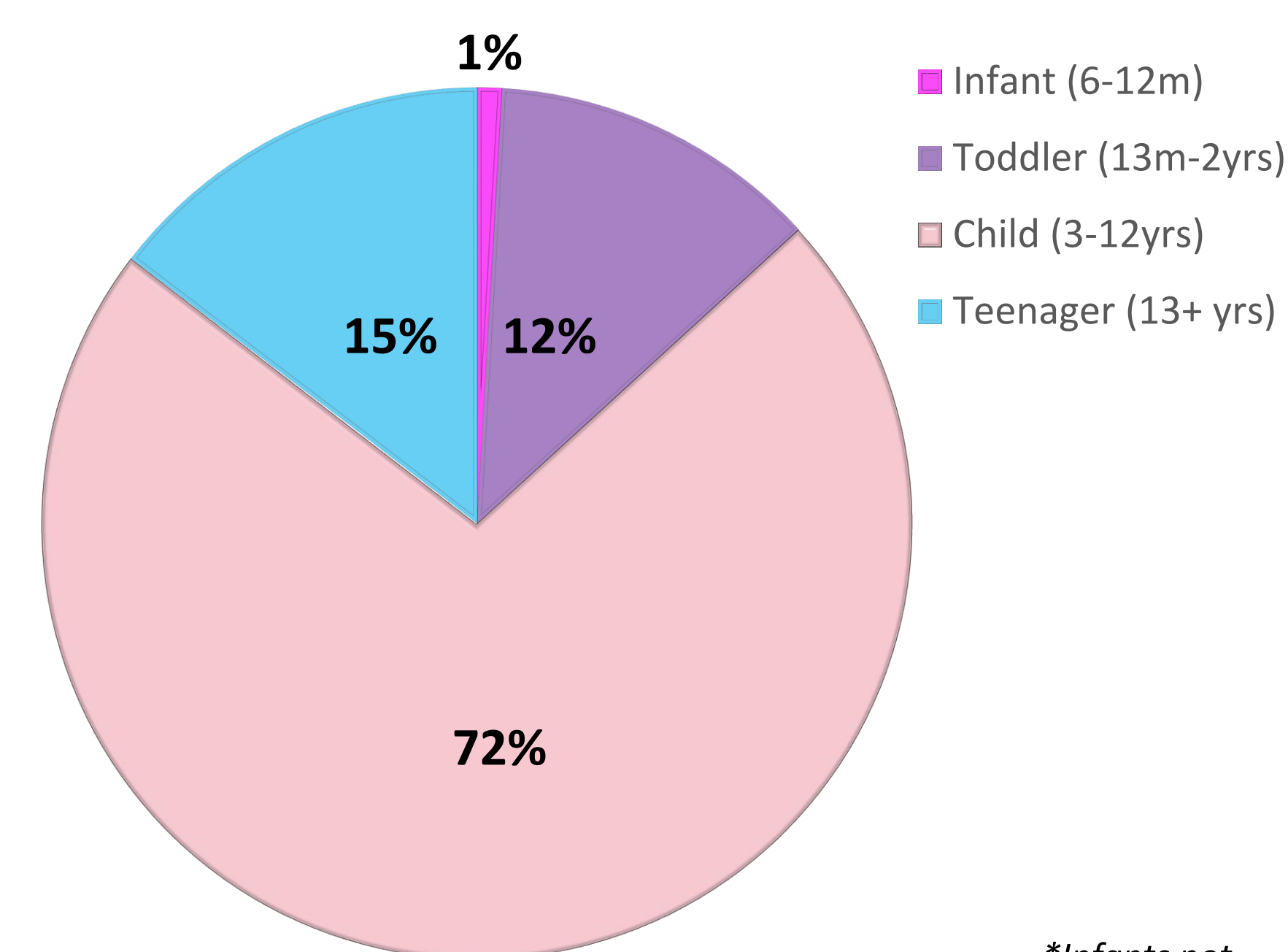


FIGURE 2. LEVEL OF DISTRESS BY CHILD'S AGE BEFORE, DURING AND AFTER VACCINATION

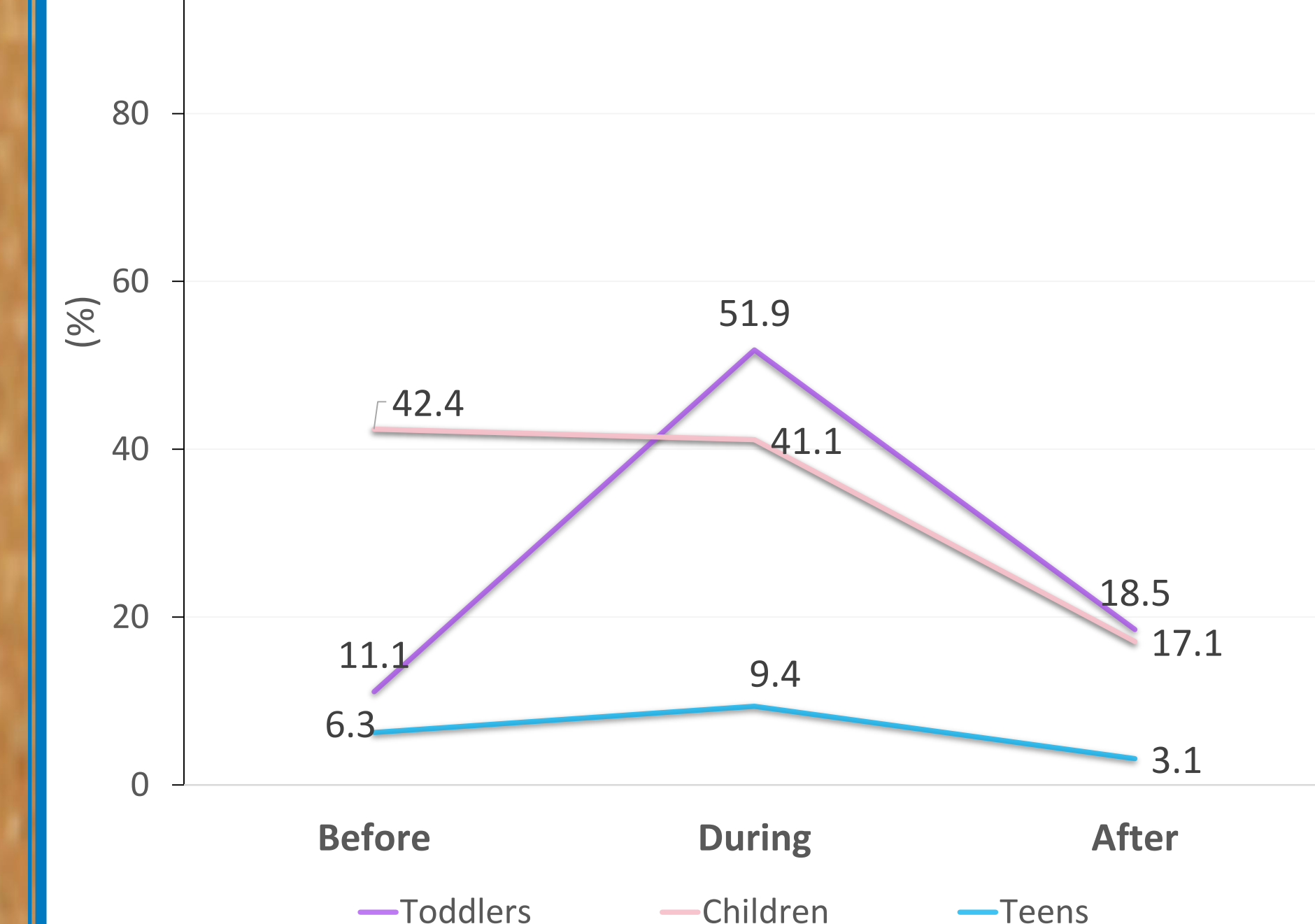


FIGURE 3. FREQUENCY OF PAIN REDUCING METHOD USED BY AGE GROUP*

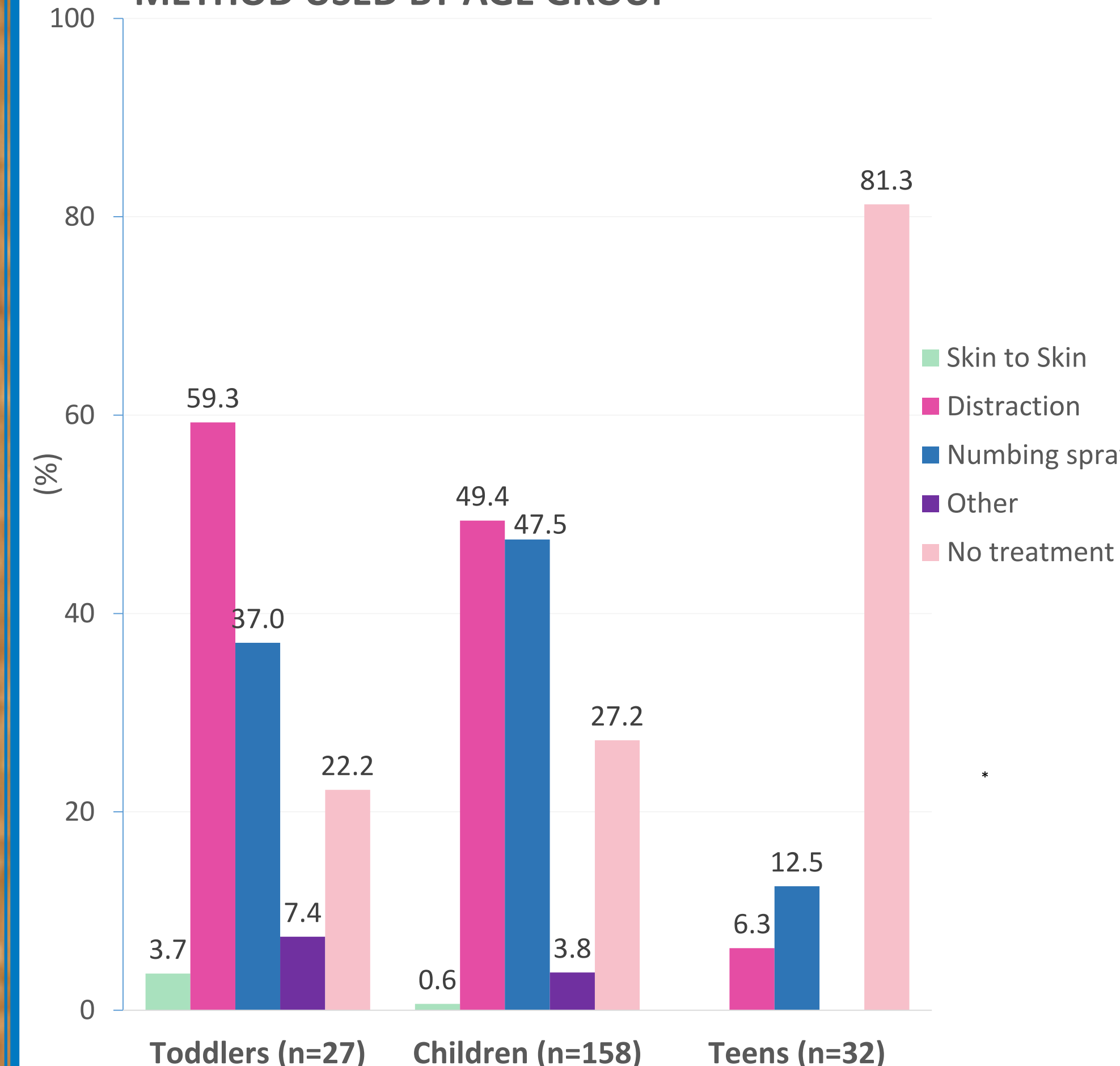


FIGURE 4. PERCEIVED EFFECTIVENESS OF MOST COMMONLY USED PAIN MANAGEMENT METHODS

