



Adolescents' Self-perceived Efficacy of Vibrotactile Device for Procedural Anxiety Reduction

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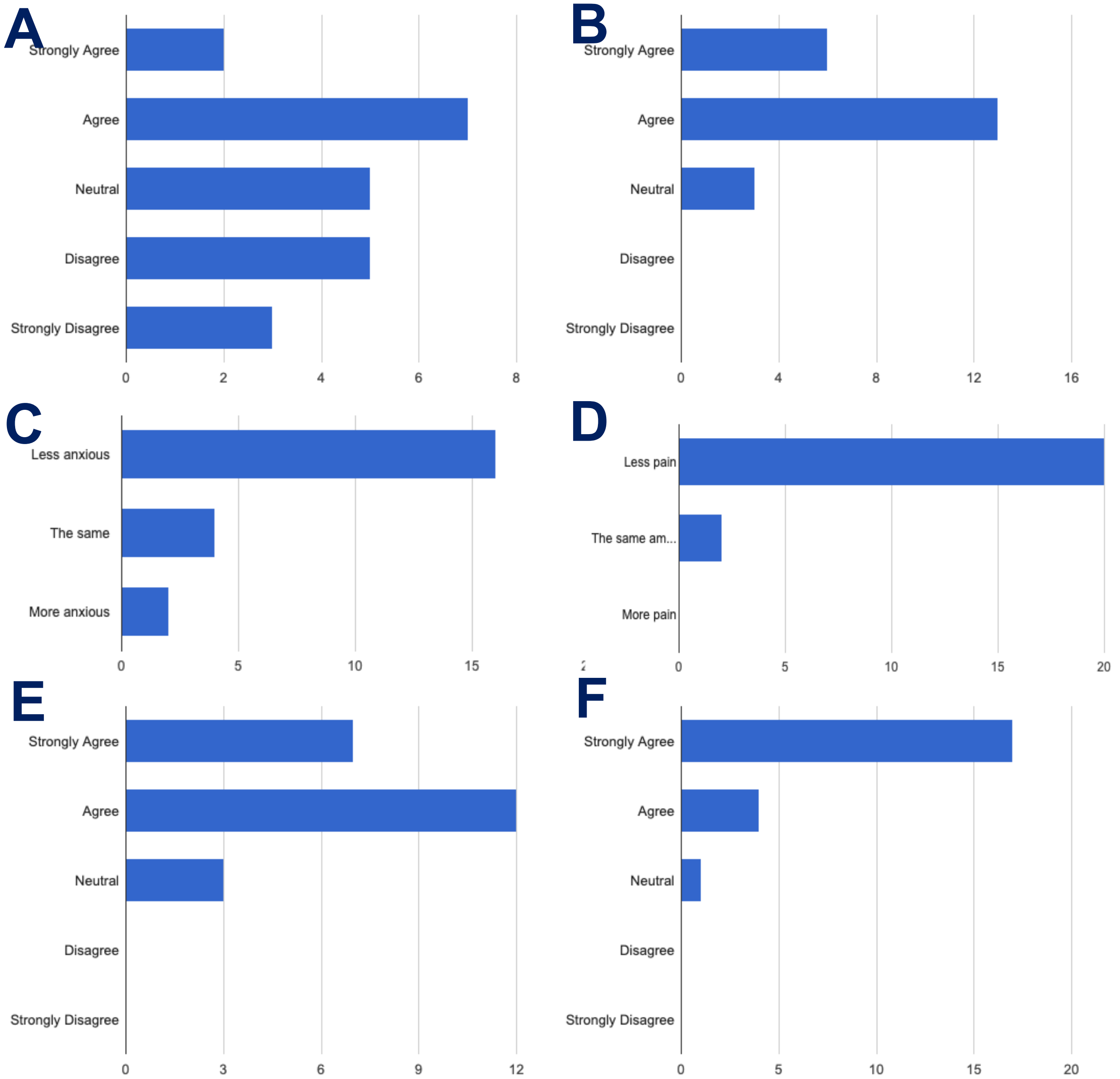
Background

- ❖ The International Association for the Study of Pain defines pain as an unpleasant sensory and emotional experience.
- ❖ A key factor in improving the dental experience for patients is decreasing their pain and anxiety, especially during local anesthesia (LA) administration.
- ❖ Vibrotactile devices (VDs) are non-pharmacologic tools that are intended to reduce pain perception and anxiety during LA administration.
- ❖ The mechanism of VDs is based on the 'gate-control' theory, which theorizes that when a stimulus is placed between the source of pain and the brain, only the closer stimulus is perceived, blocking the pain.
- ❖ There is a lack of perception data among adolescent patients regarding the effectiveness of VD for pain perception during dental procedures.
- ❖ The purpose of this study was to evaluate the adolescents' baseline anxiety while undergoing dental procedures, their perception of anxiety during LA administration, and the benefits of VD on their pre-, intra, and post-operative behavior.

Methods

- ❖ This survey-based study approved by the University of Colorado's Institution Review Board recruited forty healthy adolescents (13-17years) and their parents.
- ❖ After consent-assent, adolescents' baseline anxiety, perception of anxiety during LA administration, and benefits of VD (Buzzy®) were noted.
- ❖ Post-operative behavior, Face-legs-activity-cry-consolability scale was evaluated by an independent, calibrated observer for statistical analysis.

Results



Results

Patient Perspective

- ❖ Most study subjects (86%) reported that the use of VD improved their dental experience.
- ❖ Most study subjects (73%) reported anxiety reduction.
- ❖ Most study subjects (91%) reported reduction in perioperative perception of pain.
- ❖ Most study subjects (86%) expressed that they would prefer to use VD for their next dental procedure

Independent Calibrated Observer

- ❖ All subjects demonstrated positive or definitely-positive behavior during LA administration
- ❖ A majority of (95%) of study subjects tolerated LA administered and the procedure well
- ❖ Most (86%) study subjects had a FLACC score of 0

Conclusions

- ❖ VD was effective in reducing anxiety and pain perception in anxious adolescents during LA administration at the time of dental care.
- ❖ Adolescents were interesting in using VD at future dental visits

Implications

- ❖ VDs are a great non-pharmacologic modality for reducing anxiety and pain perception during LA administration in the adolescent population.

Acknowledgments

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