

Use of the Wallaby Weighted Blanket on Reducing Dental Anxiety in Children Anu Jolly-Young DDS, Caitlin Donovan DDS, Paul Chu DDS, Rebekah Tannen DDS, Christopher Lane DDS St. Barnabas Hospital / SBH Health System **Bronx**, NY

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Introduction

Dental anxiety is one of the main challenges in pediatric dentistry. It can negatively affect how the patient cooperates and what the dentist can achieve during the visit. Pediatric dentists work to alleviate the anxiety a child feels through behavior management to ensure a successful operative visit.

Weighted blankets have been shown to reduce anxiety in patients of all ages. Deep pressure stimulation helps the body move from a fight-or-flight response found in the sympathetic nervous system to a rest-and-digest state that characterizes the parasympathetic nervous system. With this transition, the body lets go of stress and anxiety and moves to a more relaxed sense of calm and peace. Deep pressure stimulation has been found in multiple studies to decrease levels of anxiety in its users and provide a calming effect. The use of weighted blankets can be used as an additional behavior management modality during dental visits.

Weighted blankets are cost effective, require little to no cooperation from patient, and are easy to use for the operator. They should be 10% of patient's body weight and used in ages 2 and older. The Wallaby weighted blanket (pictured in Fig. 2) is similar to other weighted blankets on the market but has a significant improvement specifically for the use in the medical and dental fields. The Wallaby blanket is made with a healthcare grade liquid barrier fabric that allows liquids to bead off. Any EPA disinfectants are safe to use on the Wallaby blanket, making it an excellent option in the dental operatory setting. There is little to no risk of using weighted blankets in the dental care setting and can be an invaluable piece of equipment for pediatric dentists.



Study Objectives

The purpose of this study to explore the effects of the Wallaby weighted blankets on anxiety for the pediatric dental population. There is little to no research on the use of weighted blankets as a behavior management modality during dental procedures in the pediatric population.

Methods

Subjects

Patients age 4-17 who are healthy (ASA I or II) and require dental treatment. Dental treatment will include exams, radiographs, cleanings, class I and class II restorations, pulpotomies and stainless steel crowns. A total of 45 subjects and 90 appointments where completed.

Patient Selection

Inclusion Criteria: Patients aged 4-17 who are healthy (ASA I or II) will be included in the study. Patients who have demonstrated anxiety at the dentist office will be included in the study.

Exclusion Criteria: Exclusion criteria: children younger than 4 and older than 17, claustrophobic patients. Patients who do not meet ASA I criteria will also be excluded.

Data Collection

Participants were assigned a number. One dental visit was performed with the Wallaby weighted blanket and one visit was performed without it. A coin was flipped to determine which visit was completed with use of the blanket. Heads indicated blanket use and tails indicated no blanket use. For the appointment with the Wallaby, after the patient was seated, the blanket was placed over the patient. The pulse oximeter was then placed on the patient and the heart rate was recorded at 5 minute intervals throughout treatment. After treatment, the weighted blanket was wiped with Cavi wipes. For the dental appointment without the Wallaby, the patient was seated and the pulse oximeter was placed on the patient and the heart rate was recorded at 5 minute intervals throughout treatment. The child and/or parent were also given surveys regarding their feelings of anxiety before and after treatment while wearing the Wallaby blanket.

Statistical Analyses

The data collected was analyzed using repeated measures ANOVA. Data was collected from heart rate monitor readings. The data was compared and analyzed between the two treatment visits. Data was collected from 45 test subjects with 2 visits for each patient.



• The use of the Wallaby weighted blanket during dental appointments demonstrated a significant reduction in heart rate throughout the procedure. (Fig. 1) The visit with the Wallaby weighted blanket provided a less stressful experience. • The difference in heart rates between the weighted blanket visit and the control visit was statistically significant with p<0.05. •The mean average of heart rates during the visit while wearing the Wallaby blanket was 90.14 beats per minute compared to 95.79 without the blanket (Fig. 3). •The heart rates during the procedures that had no weighted blanket remained higher and patients did not demonstrate relief from anxiety.

The use of the Wallaby weight blanket could be an effective behavior management modality in pediatric dentistry. Patients demonstrated decreased dental anxiety with the Wallaby weighted blanket during their dental appointment. There is little to no risk of using weighted blankets in the dental care setting and can be an invaluable piece of equipment for pediatric dentists. It would be beneficial to continue research in this area over a longer period of time with more subjects.

• Small sample size, short duration time of study • Parental opinion on use of weighted blanket, which will be added to future study • Confounding factors: Previous dental experience, presence or absence of parent during treatment, time of day the appointment takes place, order of appointments (Weighted blanket first or second), what treatment was being completed, provider's behavior management skills

PMC6710937 4) Wallaby Blanket Info Sheet. doi.org/10.5405/jmbe.1043



Discussion

Conclusions

Study Limitations

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