

# Preference and Retention of Written Versus Video Pediatric Dental Education

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## Purpose:

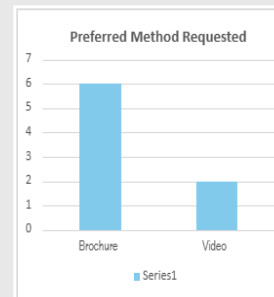
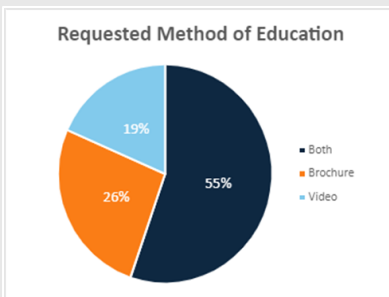
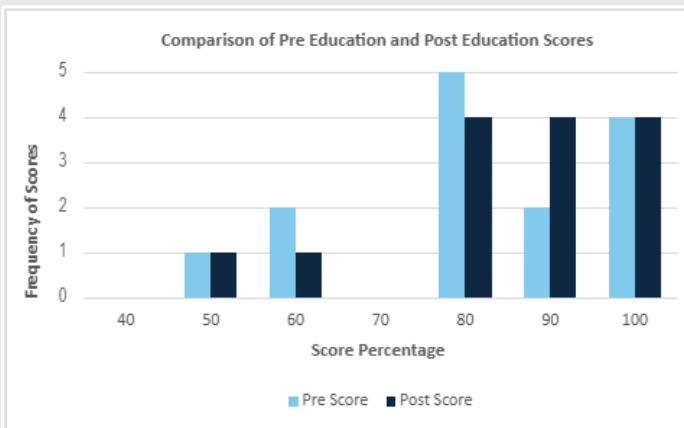
To investigate the influx of technology into healthcare for the purpose of patient education and provide insight to the preference of learning style. The research presented assesses the retention of the audience to an educational video versus a brochure given to parents or caregivers at routine appointments.

## Background:

Over the years, there has been an influx of available educational resources for patients and caregivers. Modern technology has reached an unsurpassed high in usage among children and adults. Social media can be an educational outlet for providers to direct their audience on health and wellness. Many dental providers have a presence on social media platforms where content can be accessed easily and difficult to misplace. The advantage of these social media strategies is the potential for a wide reach of viewers, especially with the benefit of sharing. However, creators must rely on an algorithm for the videos to reach the target audience. Viewers do not have to visit doctors' offices for valuable information, which can be seen as a perk for patients. On the other hand, there are many instances that require appointments for correct diagnoses. Viewers may misdiagnose themselves resulting in treatment or life-changes that are ill-advised for the patient. Does the public trust social media for health education enough to replace the more traditional methods of learning? More importantly, has the public's knowledge surrounding oral health improved with the influx of technology? Although there is a significant increase in the number of education videos in oral healthcare, there are not many studies which evaluate the effectiveness of retaining the education shared. This study was able to educate participants while conducting research to improve public health through technology as well as traditional methods. Preference of learning style and educational material is crucial for future teaching opportunities in practice to be effective, especially among our most vulnerable population.

## Methods:

Patient selection included ASA I or II children under the age of 6 with, or at risk of, early childhood caries (ECC) presenting for a dental appointment in the Primary Children's Hospital Dental Clinic. Following the agreement to participate, caregivers were given a survey to complete before leaving the clinic. The initial survey given to participating persons included questions geared towards preference of educational material, as well as questions grading health literacy. Participants that requested the "brochure" method of learning were given a written brochure that defined ECC, risk factors, and preventive care recommendations. If "video" method was chosen, participant received a QR code that was to be scanned for an educational style video that recited the information provided in the brochure. For those participants that requested "both" methods of education, the title page of the brochure included the QR code. A link for requested information on SurveyMonkey was then sent with questions designed to assess the preference and retention of the chosen method of education. The health literacy questions were the same on both surveys. Participants were not told their score from either survey. Data was then collected from the survey, which included questions answered post-appointment by the caregiver.



No conflicts of interest to disclose

## Results:

The t-test was significant ( $p < 0.001$ ), which represents that pre- and post- education scores were different. The pre-score mean was 82.14 with standard deviation of 16.26 points. The post-score mean was 85.00 with standard deviation of 15.06 points. Post-education scores were significantly higher than pre-education scores.

At the initial encounter with the participant, each person requested one of three options for their chosen method of learning about Early Childhood Caries. The percentages for video, brochure, or both methods were, respectively: 19%, 26%, and 55%. There were 14 participants who completed the post-education survey giving a 36.8% response rate. Out of the 14 participants, 8 people had requested both methods of education during the initial visit. The post-education survey asked, "If both methods of education were requested, which method did you prefer?". 75% of caregivers preferred learning about oral health using the brochure rather than the video.

## Conclusion:

Although modern technology is easily accessible and social media is thriving, this study suggests that it is not the preferred source for healthcare education. The written version of information was favored over the media version. Caregivers were eager to learn more on preventing early childhood caries during this study. Focusing on diet and oral hygiene instructions, the brochure and video taught the participants in an effective manner and delivered improved scores. The results were statistically significant with  $P < .05$ . If the knowledge gained can be applied, the early childhood caries rate could decrease.

