



Visual Storyboard For Autism Spectrum Disorder Patient's Dental Care

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Background

Visual schedules (VS) are a common teaching method of teaching children with autism spectrum disorder (ASD) on-task behavior by visually dividing the desired behaviors into a sequence of steps. Traditionally, dental appointments are completed with the tell-show-do method of behavior management, in which the providers verbally tells the patient what they are going to do, shows them, then does the action. However, individuals with ASD have trouble organizing their environment, processing auditory information and have difficulty with retaining non-visual information. A visual schedule in the form of a pictorial cue board will cue the subjects with Autism Spectrum Disorder (ASD) for the next activity within the sequence of events.

Purpose

The dental literature was assessed for effective tools needed to develop the VS for individuals with ASD for implementation at the Sparks dental clinic. This pilot project's purpose was to determine if a 10-step VS (pictorial cue board) aids individuals with ASD in completing a dental cleaning appointment or make progress toward successful completion of more steps than previously achieved.

Methods

Eight Patient ages 5-15 with ASD diagnosis who previously never attempted or unsuccessfully attempted a dental prophylaxis and examination were selected for the pilot project. A traditional dental setting with a ceiling mounted lamp, prophy handpiece, prophy paste, 3M disposable flossers, and fluoride varnish was used. The dental cleaning visit was divided in to 10 steps and visual cue-cards created representing each step. Parents were provided cue-cards and instructed to rehearse the steps with their child at home prior to the appointment. During the cleaning visit, a board with all cue-cards was visible to the patient and related cue-cards were removed when a patient completed a step. The appointment was ended if a patient failed to complete a step five consecutive times, and the step and number of attempts were recorded. Parents rehearsed again at home followed by a repeat appointment in the dental office.

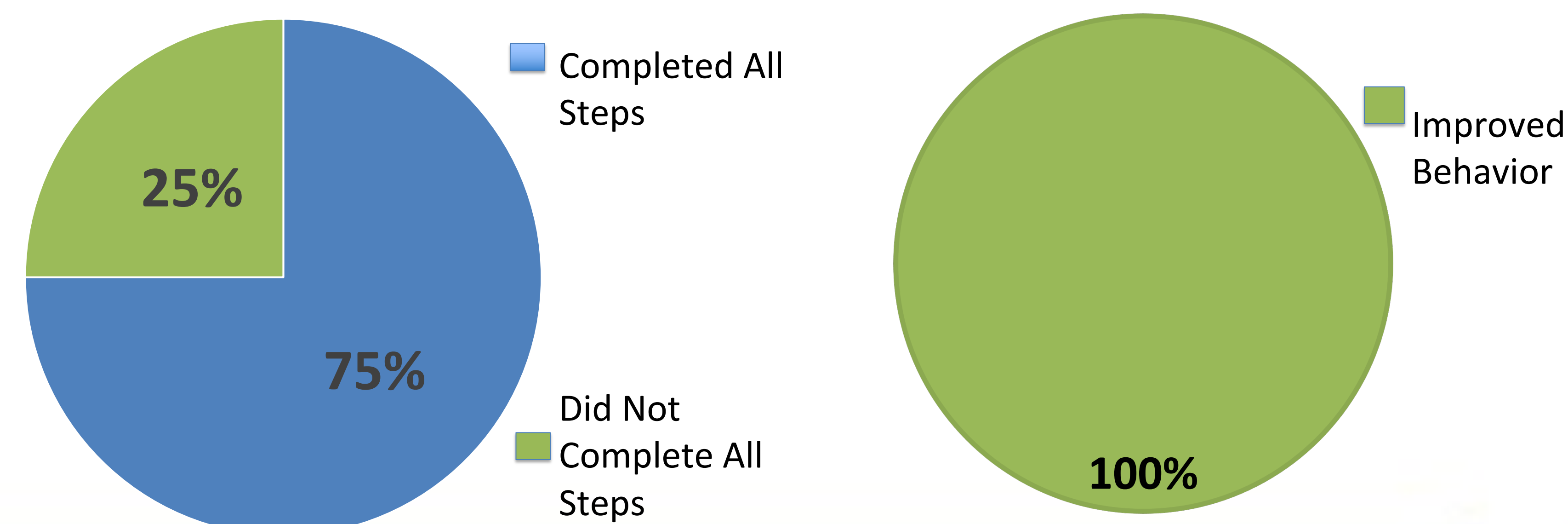


Visual schedule in a form of a pictorial cue board

Results

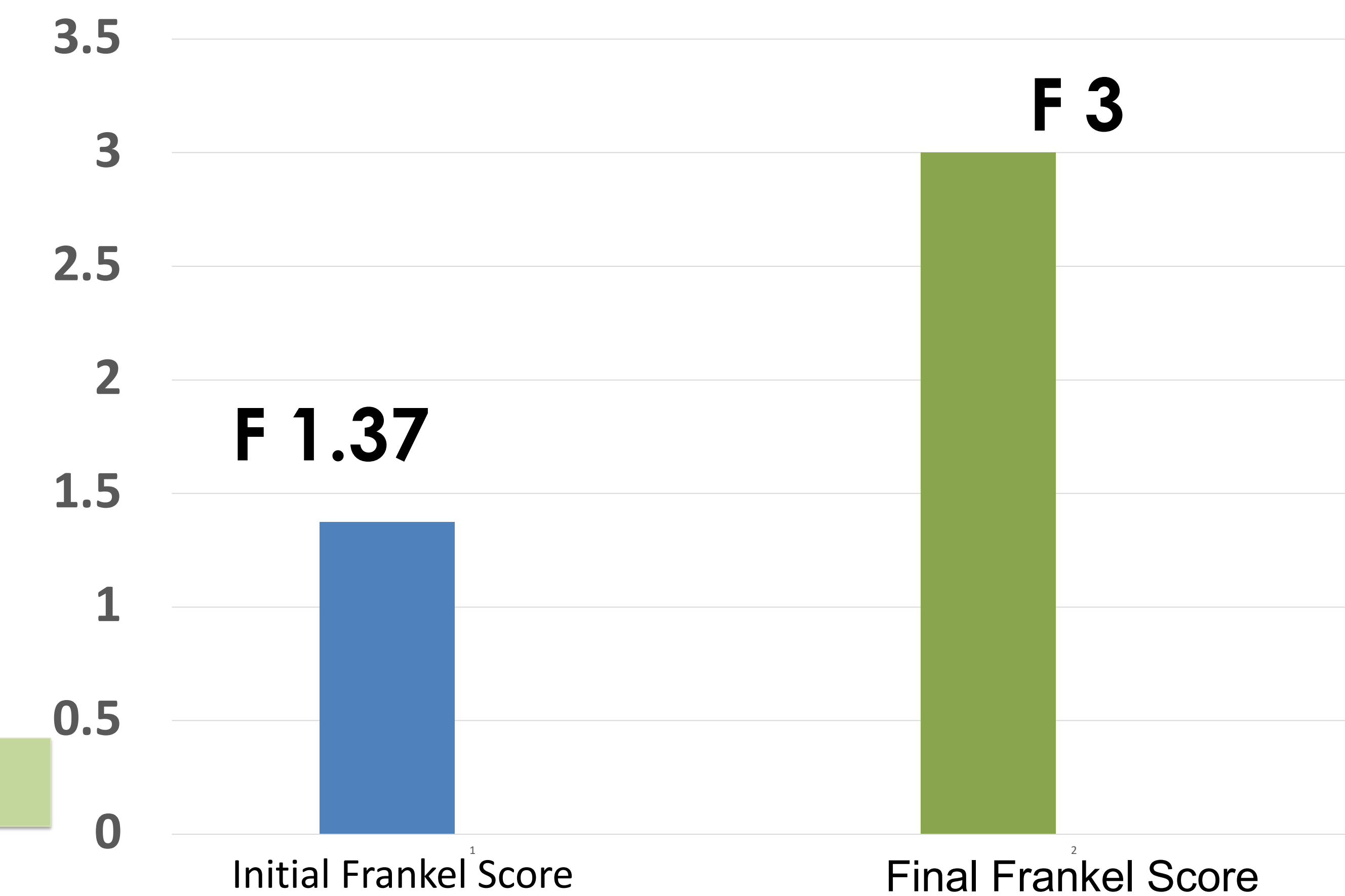
12 patients were chosen to be included in the study. A total of eight patients (6 Males/2 Females) completed study

Patient	Age (Yrs)	Gender	# of Visits	Completed All Steps	Improved Behavior	Initial Frankel Score	Final Frankel Score
A	12	Male	4	Yes	Yes	F1	F4
B	15	Male	2	Yes	Yes	F2	F3
C	8	Male	3	Yes	Yes	F2	F3
D	7	Male	2	Yes	Yes	F2	F3
E	5	Female	3	No	Yes	F1	F2
F	5	Female	1	Yes	Yes	F1	F3
G	8	Male	2	Yes	Yes	F1	F4
H	6	Male	2	No	Yes	F1	F3
Average	8.25Y	Male: 6 Female: 2	2.37	75% Yes 25 % No	100% Yes	F 1.375	F 3



Results

Change in Frankel Score



Conclusion

- All participants except one, successfully completed more steps in sequence at each subsequent visit and improved behavior was noted.
- ASD patients can benefit from a visual schedule successfully complete more steps in a dental cleaning, progress at a quicker rate, and exhibit lower behavioral stress.

Future Research

Recruit more patients to be a part of study and set up strict follow up visits, ie every 2 weeks for 3 visits. Multiple residents as opposed to one resident will serve as the clinician. A first-year pediatric dental resident has expressed interest in continuing this research project.

References

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- Mah JW, Tsang P. Visual Schedule System in Dental Care for Patients with Autism: A Pilot Study. J Clin Pediatr Dent.
- Zink AG, Communication Application for Use During the First Dental Visit for Children and Adolescents with Autism Spectrum Disorders.