



**Evaluation of Effectiveness of Tell play Do and Tell Show Do
Technique in Management of Pediatric Dental Patient: A Clinical
Study.**

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ABSTRACT

Aim: To evaluate the effectiveness of Tell-play-do using a Mobile app (My Dentist Games) compared to the Tell-Show-Do technique in the management of Pediatric dental patient.

Methodology: In present study children between 6 to 10 years of age, were divided into 2 groups i.e. Tell-play-do and Tell show do group. In tell-play-do group Children used the “My Dentist Games” app. The children were then encouraged to act as a dentist and perform dental treatment virtually on the dental app. In Tell-show-do group, the ‘tell’ phase involved a verbal explanation of the procedure. In the ‘show’ phase, they were familiarised with the treatment armamentarium and a demonstration of the procedure in a carefully defined, non-threatening manner. Finally, in the ‘do’ phase, the dentist began the treatment without deviating from the explanation and demonstration for the duration of the procedure.

Result: Anxiety was significantly lower among children who received Tell-Play-Do intervention compared to those who received film Tell-Show-Do intervention.

Conclusion: Behaviour management by Tell play Do using a dental app is more effective than Tell show do in managing the anxious pediatric dental patient.

Keywords: Anxiety, Behaviour Management, Tell-Show-Do, Tell-Play-Do

Introduction

The first dental experience is important in moulding a child's attitude towards dentistry and dental outcomes. Co-operation of a child during dental treatment is vital to render successful and high-quality treatment. (1)

Effective communication is important and is a big challenge in the dental office. A child's cognitive development will dictate the level and amount of information exchange that can take place. Not all children are able to express their fears and anxieties and have relatively limited communication skills at younger ages. It is difficult for a 5 to 7-year-old child to perceive an idea, for which he/she has no conceptual framework and to understand the dentist's frame of reference. (2)

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Child dental anxiety has been a matter of concern for many years and can be defined as a nonspecific feeling of apprehension, worry, uneasiness or dread, the source of which may be vague or unknown.(3) The sight, sound, and sensation of the air-rotor is rated as one of the most fear-eliciting stimuli. This inability to cope with threatening dental stimuli often manifests as behaviour management problems.(2)

Behaviour management techniques are a set of procedures aimed at enhancing a child's useful coping skills, in order to achieve complete willingness and acceptance of dental care, and ultimately reduce the child's perception that the dental situation is overwhelming or dangerous. (4)

The American Academy of Pediatric Dentistry had outlined behavior management methods for use with children including voice control, tell-show-do, positive reinforcement, distraction and non-verbal communication, hand-over-mouth (HOM) technique, physical restraint and pharmacological interventions such as conscious sedation, nitrous oxide, and general anesthesia. (5)

The non-pharmacologic tell-show-do technique which consists of verbal explanation of the procedure to the patient, demonstration for the patient of the (visual, auditory and tactile) aspects of the procedure and completion of the procedure, remains the most commonly used technique in paediatric dentistry. (6)

The Tell-Show-Do technique is based on the principles of learning theory and is performed by dentists themselves in the operatory. Playing with a dental imitation toy and using euphemisms instead of demonstrating on a model or observing one, provides a better explanatory concept of the dental procedure. (7,8)

Children of all age groups interact with mobile phones for playing games, browsing the internet to seek knowledge, and entertainment. Since dental fear and anxiety is a common problem in children and adolescents worldwide, new strategies are being investigated to manage these challenging situation.(9,10) With this idea, the Tell-Show-Do technique was modified into the Tell-Play-do technique, using the concept of learning by doing, in reducing children's fear and anxiety toward dental treatment and promoting adaptive behavior.(7,8)The present study was aimed to evaluate the effectiveness of Tell-play-do using a mobile app (My Dentist Games) compared to the TSD technique in the management of pediatric dental patient.

Methodology:

It was performed on the 30 children aged between 6-10 years. The children visiting the outpatient department were examined and those who met to the inclusion and exclusion criteria were selected for the study.

Inclusion criteria

1. Children having first dental visit
2. Children between 6 to 10 years of age
3. Children requiring restoration
4. Children showing Frankel's Behaviour Rating Scale score of 3 and 4.
5. Children with no relevant medical conditions.

Exclusion criteria

1. Children with previous dental experience.
2. Children showing Frankel's Behaviour Rating Scale Score 1 or 2.
3. Children with any visual defect.
4. Children with any auditory defect.
5. Mentally or physically challenged child.
6. Children with learning disability.

The children were randomly selected and allocated into two groups using block randomization (Group A: TPD Group, and Group B: TSD Group) with 15 subjects in each group.

Group A:

Children in the TPD group used the "My Dentist Games" app. The children were then encouraged to act as a dentist and perform dental treatment virtually on the dental app. "My Dentist Games" is an application developed by BUBADU information technology Ltd. available on the Google Play Store and App Store, respectively. It can be used for playfully educating children about treatment procedures such as prophylaxis, pit and fissure sealants, restorations, and extractions, while also explaining the importance of oral hygiene maintenance through brushing. After the restorative procedure the children's anxiety level was recorded using a Venham Picture Scale.

Group B:

Children in the TSD group received information about the restorative procedure through an explanation and demonstration of the instruments in a non-threatening fashion. After desensitizing, the children in the group received restorative treatment by the same trained dentist. Anxiety levels during the treatment procedure were assessed by a Venham Picture Scale. For the TSD technique, the 'tell' phase involved a verbal explanation of the procedure. In the 'show' phase, they were familiarised with the treatment armamentarium and a demonstration of the procedure in a carefully defined, non-threatening manner. Finally, in the 'do' phase, the dentist began the treatment without deviating from the explanation and demonstration for the duration of the procedure. After the restorative procedure the children's anxiety was recorded using a Venham Picture Scale. Each child was asked to point out the figure that represents their state of mind the most. A score of 1 was recorded for each distressed figure selected by the patient and the scores are summed up. Thus, score can vary between 0 and (8). Higher scores indicate high anxiety. The data were entered over a spreadsheet, and statistical analysis was performed using SPSS software version 17 (IBM, Chicago, United States).



Figure no 1: My Dentist Games App



Figure no 2: Venham's Picture Scale

Result

Present study was conducted to comparatively evaluate the efficacy of the tell-play-do and the tell-show-do techniques in managing anxious pediatric dental patients. Self-reported measure of anxiety: Venham's picture scale was administered two times to each patient: Prior to each treatment session and immediately following the treatment on subsequent visits. Total 30 subjects were included in the present in-vivo study. Forty children with the mean age of 7.8 years participated in the study. This included 15 male and 15 female children. t- test was used to determine the statistical significance. It was found that the mean anxiety level in experimental group reduced post operatively (1.05 ± 0.30) as compared to pre operative level (2.88 ± 0.34) which was found to statistically significant ($P < 0.05$). In control group no statistical significant difference were seen between pre (2.65 ± 0.23) and post (2.05 ± 0.31) treatment mean anxiety level.

Table no. 2 Mean VPS		
Group	Mean VPS	P value
TPD group	Pre treatment 2.88 ± 0.34	P ≥ <0.05
	Post treatment 1.05 ± 0.30	
TSD group	Pre treatment 2.65 ± 0.23	P ≥ 0.05
	Post treatment 2.05 ± 0.31	

Discussion

The primary emotion of a child while entering into a dental office is anxiety and fear.(11) Dental anxiety and fear being attributed by many as one of the major causes to avoid seeking dental care by children and is one of the big challenges in the dental office.1 Alleviating a child's dental anxiety is needed in mitigating the immediate fear and it also prevents apprehension from continuing in the later stages of life. It is of vital importance that any approach to behavioural management for the dental child patient must be implanted in empathy and a concern for the well-being of every child.(12)

The management of children's behaviour is a vital component of pediatric dental practice. The first dental visit plays an inherent role in eliciting a positive dental attitude. Cooperation of child during dental treatment is of prime importance to render good quality of treatment.2 Behaviour management techniques are aimed at enhancing a child's cooperation, establish proper communication, decrease fear and anxiety, render successful and good quality dental care, build a trusting relationship between the dentist, child, and parent, and promote the child's positive dental attitude.(13)

The American Academy of Pediatric Dentistry (AAPD) recommended concentrating more on non-pharmacologic intervention in future studies.3 Most commonly used behaviour management techniques (BMTs) by pediatric dentists are tell-show-do and modelling, distraction.(14,15)

Just by observing a model, explaining, or demonstrating the dental procedure may not provide a more explanatory concept, instead of it makes them play with dental imitating instrument toys which will provide a more explanatory concept. Using the idea of learning by doing concept

TSD technique was modified to tell-play-do. In present study “My Dentist Games” app was used for the child. The children were then encouraged to act as a dentist and perform dental treatment virtually on the dental app.

Venham’s picture test, which was used in this study, is one of the reliable measures of self-portrayed anxiety in children. It is very effective in measuring the emotional state of the child at the chair side (Venham et al in 1977).(16,17)

In present study it was found that TPD with smartphone app was effective in reducing anxiety in pediatric patient during the dental treatment. These results are supported by studies conducted by Patil et al.14 and Shah et al.(18).

Conclusion

By simple modification of TSD to TPD can have a good impact on younger children, so that they can feel comfortable and accept the dental treatment. From the present study it was observed that, behaviour management by using a dental app is more effective than TSD in managing the anxiety of a child. Thus, a dental app is worth utilizing in pediatric dentistry to guide the behaviour of children during their first dental visit by reducing their anticipatory anxiety.

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