

FUN TO BRUSH

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Introduction

Oral health is closely tied to the overall health of our entire body. Thus, it plays an important part in order to maintain a child's wellness. Helping children develop healthy habits to care for their teeth at a very young age is extremely important. Due to the fact that preschoolers are at an age where they are developing skills that permit them to slowly become autonomous with their personal care, it is a perfect time to teach them skills and give them knowledge that will be beneficial for a lifetime. According to a 2017 National Oral Health Survey conducted in Brazil, it was noted that only 46% of children under the age of 5 were caries free. The study also revealed a 37% prevalence of plaque. The study's objective was aimed at proving that after playful learning intervention, the oral care habits of preschool aged children would show improvement. The results indicated that there was indeed an improvement.

The dental professional plays an intricate role in aiding families to obtain optimum oral health and provide an ongoing peace of mind for an entire family. Not only is it important to assure that children have the best oral health care to have a great smile, but that they are protected from the negative effects of poor oral health as well. Once they initiate this stage at a young age, they can avoid many problems that result from poor oral health such as periodontal disease and dental decay. Along with regular toothbrushing, a child's diet plays an important key role in their dental health. The amount and frequency of sugar consumption can be the child's biggest villain. The longer and more frequent the child is exposed, the greater is the risk of exposure to dental decay. Therefore it is very important to educate children and explain to them both the importance of having a healthy mouth, and the importance of good nutrition.

Assessment

The target population for this project was Pre-K students from ages 4 to 5 years old. The assessment was performed through a verbal questionnaire to show us the level of knowledge that the children had regarding oral hygiene. Despite the fact that the children were ages 4 and 5, 80% of the classroom answered the questions correctly. It was found that 65% responded that their parents brushed their teeth twice a day, while the other 35% have mentioned that their parents only brushed their teeth once a day. It was observed that 90% of the children knew how to hold the toothbrush correctly and properly demonstrated the circular tooth brushing technique. An alarming finding was that 95% of the parents did not use the correct amount of the toothpaste for the child. It was observed when two pictures of toothbrushes were shown to the children; one with the correct amount and the other with the wrong amount of toothpaste. The majority of the children chose the picture of the toothbrush with the wrong amount of toothpaste. In addition, a nutritional assessment was performed to learn the type of food ingested by the children, both at home and at the daycare, to see if the children were exposed to food that contributed to the high risk of caries. For this, teachers were interviewed about the school menu. We asked what kind of snacks and meals were offered, and we asked as well about the approximate portion(s) of food that were given to the children. This gave us a better insight as to understand if the nutrition and the oral hygiene of the child were cohesive, as in working together to provide the best oral care as a whole. An orientation was provided to both the faculty and the children about the importance of healthy nutrition and oral hygiene, to accomplish the goal of improving the health of the community. According to Sigaud, C. H. D. S., Santos, B. R. D., Costa, P., & Toriyama, A. T. M. (2017) article, "Promoting oral care in the preschool child", playful learning interventions

can truly enhance how the child can absorb new techniques for their overall oral health. This gave us the idea to plan meeting our goals by using those techniques.

Planning

Our goal was to ensure this target population of 4-5 year olds gained independence and knowledge of the importance of oral health and a healthy diet for teeth with the guidance of their parents and their daycare teachers. The measurable goal is to teach them the importance of oral health; how to correctly brush their teeth and what foods are high risk to cause cavities. From there on having an improvement in the children's overall oral health.

An example of measurable objectives started off with a questionnaire

- Who brushes their teeth? Their parents or themselves?
- How many times a day do they brush their teeth?
- Do they know what happens to their teeth when they don't brush?
- How often do they change their toothbrush?
- Do they apply a pea sized amount of toothpaste on their brush?
- How long do they brush each time they brush?

Based on the previous assessment findings we decided a playful "tell show do" program would be very helpful. We developed a system using books, audio/visual, and hands on approach.

Implementation

To meet these objectives we come to a familiar environment for these children surrounded with people they trust. We worked with their teachers and came to their day care to

start this fun and informative day. First we asked them the above mentioned questions and who was responsible for their oral care. After obtaining that data, we began reading a book called 'Brushing Teeth' by Mari Schuh. The purpose of this was to reinforce the importance of brushing twice a day, and putting a pea sized amount of toothpaste on the toothbrush. The most important part was going through every page and making sure to interact with the target population. When something seemed unclear we would explain. We especially tried to share the importance of how easily plaque can build up if brushing wasn't done properly or not done at all. There was a sentence in the book, "bacteria loves to eat teeth with sweets on it, causing cavities", which did a great job reiterating the message we were trying to get across. So, if the audience didn't take our word for it, they would have heard for themselves from the text of the book we read for them.

After completing the book, typodonts were given to the children as an example of the Tell-Show -Do approach. One study, 'Effectiveness of teaching methods for toothbrushing in preschool children' 4-6 year old children, showed three methods of teaching children how to brush effectively. First method of teaching was using pictures and slides on a projector, second was a demonstration – a dentist having a child hold up a mirror and demonstrate while in the oral cavity, and third method was an individual professional went over tooth brushing with each child personally showing them in detail how to brush and which surfaces to target. The method that was most effective and showed the least amount of disclosing was the third method. Therefore, the five of us broke into smaller groups and each had our own 2-3 students that we would fix and show how to correctly brush.

Another method we used was, putting pictures of different kinds of foods that include: soda, veggies, candy, cake and fruit. We would then ask which of the foods/items would most likely cause cavities in their teeth. We would explain the importance of eating healthy, not just for overall health but also to prevent teeth from becoming weak and having cavities if they eat carcinogenic foods. As dental professionals, the main idea of this process was to ensure that children not only understand that brushing is important but hopefully find it entertaining and fun. Therefore, lastly in order to make children truly encourage that Brushing is Fun; we played a song "This Is The Way We Brush Our Teeth " and the whole class sang along with us. Since the target population are preschoolers we thought it would be a good way to have them enlightened to the idea that brushing and singing is fun. While signing we also demonstrated on the typodonts at the same time. Just as with learning the ABC's through song, this method allows for better memorization and shows a fun, non threatening way to get the children to start this healthy and important habit.

Evaluation

We planned to do a post-evaluation in six months to observe any improvements of OHI and nutrition education. We felt that the most appropriate manner to communicate with the children would be with a verbal questionnaire, and a written questionnaire for the day care provider about the implementation of OHI and nutrition. We expected to have the same students from the previous time, which would provide us with the most accurate results. The measurement of effectiveness was based on asking the children if they remembered the typodont and the toothbrush, the amount of toothpaste that should be used, and what are they currently

eating at the day care center and at home. We projected the whole class would have remembered how to brush their teeth, and a 50% chance of the class choosing the correct amount of toothpaste necessary for brushing, because commercials and ads can be misleading on the suggested amount of fluoridated toothpaste. We decided to have a written questionnaire for the parents as well. When the parents will bring their child to the daycare, we would briefly explain what the questionnaire is about and the purpose behind it. From our initial visit and assessment followed by the reaction from students and staff we believe that the program accomplished what we planned. In the future we would account for issues that were seen after we conducted our surveys in the upcoming months by repetition and reeducation on those issues.

Conclusion

The goal for the dental hygienist is to educate the public about the importance of oral hygiene and having a balanced nutrition. Sometimes due to a person's social status, educational background and finances, not everyone has the opportunity to learn about the importance of visiting a dentist or a hygienist to seek OHI guidance. Also, not everyone can afford to buy nutritional foods. Food that is not good for a person's health tends to be less expensive, and sometimes families have no choice but to buy them. We learned that in order to reach out to the community and accomplish the goal, we first have to understand their living circumstances and their educational background to do the best possible to help them make a positive change. We accomplished what was initially proposed, which was the children to learn how to brush their teeth. When the six-month evaluation was completed, we learned that the children still remembered how to do so, which was a very positive result. An important aspect we noticed

from this project, is that it is essential to spread the knowledge of oral hygiene and nutrition, starting with the children, because it will be easier for them to practice and have it become part of their routine, and hopefully carry this knowledge throughout their lifetime.

Resources:

1. <https://www.healthychildren.org/English/healthy-living/nutrition/Pages/Childhood-Nutrition.aspx>
2. Sigaud, C. H. D. S., Santos, B. R. D., Costa, P., & Toriyama, A. T. M. (2017). Promoting oral care in the preschool child: effects of a playful learning intervention. *Revista brasileira de enfermagem*, 70(3), 519-525.
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