

## **Healthy Teeth - Happy Smile**

Health Program Planning Assessment

DEN 2413 – Introduction to Public Health

---

By: Nazira Savchenko, Kseniia Dymchenko, You Jin Hong

## Table of Contents

Introduction	2
Assessment	3
Planning	4
Implementation	5
Evaluation	7
Conclusion	9
References	10

## **Introduction**

The habits that we form as children often follow us into adulthood, and building a healthy, conscious lifestyle starts early. With dental health being one of the most important factors towards a person's overall health, it is crucial that children are accustomed to following good dental habits from an early age. Education about good dental habits encompasses much more than frequency or techniques for proper brushing of teeth, and doesn't end with parental supervision of this process – in fact, it only begins there. Building a strong support network, reinforcing the knowledge learned at home, and supplementing it with more information and resources on how to take care of your oral health is important to help children form and maintain good health and hygiene.

Among the socioeconomic issues faced by caregivers in ensuring children's dental health is the effect of the COVID-19 pandemic. According to a study done by Doctors Kranz, Evans, and Geissler with the National Survey of Children's Health, children experienced both a decline in dental visits and an increase in adverse oral health outcomes, such as toothaches, cavities, or bleeding gums, in the period following 2021 as compared with data from years 2017-2019.<sup>1</sup> The damaging effect of the pandemic comes on top of the already existing disparities in health coverage and participation. According to the statistics from the National Health Interview Survey published with the Centers for Disease Control and Prevention, almost 20% of children aged 2-17 in the United States haven't had a dental visit in 2020.<sup>2</sup> This leaves a significant bulk of the young population not receiving proper dental care or treatment. One way to help close the gap between children and proper dental care is through efforts in educating and supporting them with dental health-themed school programs.

Our group proposes the Healthy Teeth-Happy Smile program, aimed at educating and supporting elementary school children in their dental health journey. This program implements three topics to ensure a well-rounded approach to oral wellbeing: technical knowledge regarding brushing and flossing, the role of nutrition, and professional resources, including doctor visits. Each of the parts incorporates educational techniques supported in peer-reviewed periodical journals, such as the Journal of the American Dental Association (JADA), and Nature's British Dental Journal (BDJ).

### **Assessment**

With the important and challenging goal of the program being improving children's literacy regarding healthy dental practices, proper assessment of children's understanding of the material is crucial to the success of our efforts. While knowledge questionnaires and surveys might be the best at getting quantitative data that is easier to evaluate, we want to avoid the exam-like feel of the program and encourage children to engage without the pressure of penalty for answering questions wrong. This leads us to choose a more qualitative assessment, focused on verbal engagement and direct observation.

At the heart of this program is a variety of verbal assessments, centered around letting children choose when and how they contribute to the conversation, and giving them plenty of opportunities to do so. Throughout the presentation, we incorporated simple check-in questions to see if the children remembered the information presented to them, as well as to gauge the children's overall interest in the presentation. Questions such as whether the children brushed their teeth today, what kinds of foods they think are healthy, or if they like going to the dentist helped us evaluate the overall knowledge and comfort level of the children around dental topics.

Questions aimed at information recall, such as how many times a day should you brush your teeth, or what foods are good to eat every day, helped us evaluate whether the children were paying attention during the presentation, and calibrate how we present the information to them.

A similar, but more practice-centered assessment method that we implemented is the Tell-Show-Do method. In explaining how to brush their teeth, we started off with the verbal and visual presentation of the brushing methods. After that, we continued to show and perform the method on typodonts, helping children remember the techniques better. This assessment method allowed us to present the information in multiple different ways to help all children understand and remember the proper teeth brushing techniques.

## **Planning**

As this program is designed to be a part of elementary school curriculum, an important thing to be mindful of is accessibility and appeal of the information we hope to provide to young children. Therefore, the main goal of the Healthy Teeth-Happy Smile program is to present interesting and engaging information to children to help them get the most out of this program. Prior to the presentation, we researched and discussed relevant presentation methods and tips to keep our participants engaged. An initiative from the Dundee School of Pediatric Dentistry aimed at integrating oral health promotion with English language teaching, Starting Conversations on Oral Health, presented a multitude of ideas to present dental information without a heavy reliance on medical terms.<sup>3</sup> Using colorful illustrations, short and easy phrases, and physical models whenever possible helped us make the presentation exciting and memorable.

In order to improve our program and ensure its success, we defined one measurable objective to tie together all of the program's efforts. By the end of the program, we aimed to have 80% of the students display proper brushing technique. Therefore, we revised our presentation and poster boards with a heavier focus on giving memorable and actionable instructions for proper teeth brushing. This meant dedicating extra presentation time to cover how many times its recommended to brush teeth and floss per day, how much time to spend on brushing teeth each time, the proper way to hold a toothbrush and how to ensure all teeth get cleaned well. At the end of the presentation, we included a children's cartoon video to help recall and memorize the proper brushing technique. With colorful characters and a catchy song, this video kept the children's attention engaged while supplementing the presentation with extra time to cover the proper brushing techniques.

## **Implementation**

The success of this program rests in proper implementation of what we planned to present. This started with establishing a safe and supportive environment for the children as we began our program. Keeping a welcoming smile and an open mind with curiosity from the start to the end of the program helped us alleviate the stress that children may experience when meeting strangers or in case they had previous negative experiences with dental visits. As each of us introduced ourselves, we invited the children to answer a few simple questions about their experience with oral health. Questions like "Did you brush your teeth today?", "Do you like visiting the dentist?", and "How often do you brush your teeth?" received a mostly positive response, helping the children get more comfortable with the flow of the program, while simultaneously helping us identify any gaps in the children's knowledge and focus on those during the presentation.

We kept our presentation short and engaging, in order to keep the children interested rather than bored. Before delving into the details of proper dental hygiene and good habits, we established the motivation behind our talk. By dedicating a few minutes to explain to the children the importance of keeping their teeth healthy through both positive and negative consequences (such as “being able to eat delicious food”, and “avoiding a bad toothache”), we garnered success with children responding with their experiences. This set up a solid ground for the children to pay attention to the talk and motivated learning. Within our presentation, we included active recall questions such as “What healthy foods do you know?”, and “How many times a day should you brush your teeth?” to help children process the information they just learned and stay on track with remembering key details of the presentation. Tailoring the presentation to the children before and during the course of our introduction contributed greatly to good reception of the information. Remembering that people see “10% of what they hear and 20% of what they read”, we were able to successfully direct the children’s attention with the use of colorful and bright pictures and minimizing the use of text and long verbal descriptions.

After the presentation and before diving into the practical part of the program, we gave the children more time to ask questions or share comments about what they learned and how they felt about it. Motivating questions such as “What was interesting to you?” and “What would you like to learn more about?” not only gave us an insight into how the presentation was received, but also allowed us to lead into practicing the brushing techniques on typodonts. The Tell-Show-Do part of our program was the most engaging and allowed the children to immediately reinforce the practical knowledge they learned. During this part, we gave simple and easy-to-follow instructions on how to brush teeth properly, after which we allowed the children to practice for themselves, under our supervision. This allowed the children to ask any clarifying questions and

request more assistance and explanations on how to perform the tasks, if they needed. Although not everyone was getting the techniques quite right on the first try, we felt confident in everyone's overall learning, as we knew that in general, people remember most of what they hear, see, and do. With direct observation, we were able to monitor children's progress and offer guidance to those who seemed unsure or not entirely confident in what they were doing. By the end of this activity, most children seemed confident with mastering brushing teeth and looked excited to practice more at home. Overall, the program went as planned and our first impression was that we were successful in delivering key information about dental health to children.

## **Evaluation**

In order to determine the progress and success of our program, we implemented two types of evaluation techniques: formative (during implementation), and summative (after completion). For ensuring success of our program, thorough formative evaluation was crucial as it allowed us to make necessary changes to improve the course of the program and adapt to the feedback we were receiving from children in real time. The evaluation process started as soon as we met the group, as we were gauging their mood and comfort in participating in discussion. Putting extra effort into engaging and friendly introduction and light conversation/questions made a positive impact, as more and more children decided to join in the conversation over the course of a few minutes. During the presentation, paying attention to children's facial expressions allowed us to figure out when they were confused and pause in order to give everyone time to catch up and process the information given. Stopping frequently to ask recall questions benefitted both the children in remembering the key details, and us in evaluating how many children were staying on track. As we received more and more participation and correct answers, we knew the presentation was going well and the information was being received with



success. The most valuable time was in implementing the Tell-Show-Do method and engaging children in practicing proper teeth brushing. Formative evaluation during this process helped us ensure everyone's success and understanding of the brushing procedure. Paying attention to verbal and non-verbal feedback, such as questions and level of engagement, helped us determine who was confident and who needed help. Responding promptly to both positive and negative feedback by either giving praise for performing the techniques correctly, or offering positive encouragement and support to those struggling, helped us get everyone on a level playing field in brushing teeth practice.

After the fact, we needed to perform a summative evaluation of our success in order to draw beneficial conclusions in what went well, and what could use improvement. During the presentation part, about 70-80% of students were participating consistently, and we were getting correct answers to recall questions about 60% of the time. This shows us that although children were engaged and happy to participate, not everyone was getting all of the information we tried to convey. Compared with the success of the Tell-Show-Do part, where an overwhelming 90% of students performed the brushing techniques correctly and only 2 students struggled to get it right by the end of practice, we realize that practicing what you just learned is the best way to ensure success and reception of the information. This means that for future implementations of the Healthy Teeth - Happy Smile program, we and any new collaborators should consider incorporating more practicing exercises to engage the children and help them retain the knowledge. Overall, this program was successful in achieving the goals we set out to educate children about the importance of dental health and equip them with necessary knowledge to maintain their own oral hygiene.

## **Conclusion**

The Healthy Teeth - Happy Smile program aims to provide elementary school children with the knowledge and tools for good oral health. Implementing presentation techniques from the pediatric dental research project Starting Conversations on Oral Health proved effective in relaying information and keeping the presentation interesting for the children. Our focus on engagement and hands-on practice proved successful, as formative and summative evaluations highlighted the importance of practical activities for knowledge retention. While the overall program achieved its objectives, there are a few improvements that can be made in future implementations of this program.

Going forward, we can increase the time dedicated to practical exercises and integrate additional interactive elements to increase information retention. Future iterations of the program should also focus on collecting more quantifiable data to precisely measure improvements in dental health literacy. This could be achieved through pre- and post-program knowledge questionnaires.

Overall, the Healthy Teeth - Happy Smile program lays a strong foundation for promoting lifelong oral health habits. Our findings demonstrate the significance of interactive approaches to health education in elementary schools. By continuing to refine our methods, we can maximize the positive impact on children's dental wellbeing.

## References

American Academy of Pediatric Dentistry. Policy on the dental home. *Pediatr Dent* 40(6):29–30. 2018

Craig S, Armstrong R, Bedi H, Bunn R, Seeballuck C. Starting conversations on oral health. *Br Dent J*. 2024;236(2):123-129. doi:10.1038/s41415-024-6783-3

Donoff RB, Simon L. To achieve oral health in America, dental education needs to evolve. *JADA*. 2022;153(8):731-733. doi:10.1016/j.adaj.2022.05.002

National Center for Health Statistics. National Health Interview Survey (NHIS) [Internet]. Hyattsville, MD: National Center for Health Statistics (2024). Available from: <https://www.cdc.gov/nchs/hus/topics/dental-visits.htm#ref2>

Staines, K. Oral medicine: the importance of a team-based approach. *Br Dent J* 236, 227 (2024). <https://doi.org/10.1038/s41415-024-7127-z>