

Smile Savers

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Introduction:

Our service learning project, which is meant to educate middle school students between the ages of 12 and 14, covers important facets of dental health education. The project's layout meets the needs of this age group, considering their developmental stage and learning preferences.

We prioritized mouthguard usage education, in order to reduce sport-related oral injuries among children aged 7 to 11 years old, as indicated by an assessment (*Mojarad, Farhadian, Torkaman, 2020*). As Lee et al have reported, middle school age students are known to use flavored e-cigarettes regularly, therefore we included tobacco cessation education as an essential component of our project. Moreover, research highlights how nutrition affects dental health, especially in kids who consume sweets throughout the day and have inconsistent brushing schedules (*Jaiswal et al., 2021*). As a result, we included thorough instructions on oral hygiene in our curriculum, along with methods like the Modified Bass Technique and proper floss pick technique.

The goal of our project is to provide seventh-grade kids with valuable information on dental hygiene, the effects of nutrition on oral health, sports safety, and the dangers of vaping in a simple, clear, and approachable manner. Our program, which is being used at Brooklyn Prospect School, uses Kahoot surveys for pre and post-intervention assessments of students' understanding. Students are encouraged to be actively involved in activities including oral care demonstrations, interactive learning sessions, and plaque removal exercises. Post-surveys and hands-on exercises are used in evaluation to assess students' comprehension and skill development.

Assessment:

For this service learning project, middle school age children were the primary target population for oral health education. Since the target population consisted of children ages 12-14, we formulated a project appropriate for a younger audience. According to Mojarad et al, it is proven that “the most commonly prone age to sport-related dental injuries are between 7 and 11 years of age”. Since this is one of the main causes for dental injuries in young children, our group decided to highlight the importance of mouthguards when playing sports for our project.

In addition to the prevalence of dental injuries among young children, according to Lee et al. (2021), “among current youth e-cigarette users overall, 84.7% used flavored e-cigarettes, including 85.8% of high school users and 79.2% of middle school users”. Due to the rise of E-cigarette use among young adolescents, tobacco cessation was added to the group presentation. As registered dental hygienists, it is our duty to educate and inform the public the consequences of substance use, no matter what age.

The journal *Evaluation of Oral Hygiene Status Among 12-14- Year-Old School Children* concluded, “oral health status of children consuming high sugar, more snacks per day, and brushing occasionally was poor”. Due to this assessment, it is imperative that we introduce adequate oral hygiene instructions to these students.

Planning:

The goal of our service learning project is to educate seventh grade students how to properly take care of their teeth, how their diet affects their oral health, how to protect their teeth when playing sports, and the negative impact vaping can have on the oral cavity. This project must be clear, precise, and easy for the students to understand. At the start of the presentation, students will take a survey to see their prior knowledge of oral home care, the importance of

mouthguards when playing sports, and the risks of vaping, in regard to the oral cavity. After the lesson, students will take the survey again to show how much they learned.

Students will be asked to participate in a planning activity. These activities will demonstrate if the program goal was successful or not; therefore, this demonstration needs to be interesting and enticing to the students. They will be given photos of teeth that are covered in “biofilm”. This was done by printing photos of teeth, laminating them and covering a number of the surfaces of the teeth with dry erase markers. They will demonstrate identification and removal of the “biofilm” by erasing the marker with a toothbrush. Next, students will demonstrate “Tell, Show, Do” on typodonts. They will be taught the modified bass method, traditional flossing technique, and floss pick technique. First, the students will be asked to show their oral care routine on the typodont. Then, we will tell them the proper techniques and demonstrate them on the typodonts for the students. Afterwards, we will ask the students to show us the adjustments they made.

Implementation:

The program will start with each member introducing oneself to justify the credibility of being hygiene students. The overall goals are to improve the understanding, implementation, and performance of oral healthcare at home among 7th grade students. Pre-surveys via Kahoot will measure the students’ initial knowledge on proper oral homecare, vapes, and mouthguards. Post-surveys via Kahoot will measure the students’ understanding after the poster board presentation and physical activities. After obtaining the statistics, the results will be compared and evaluated to see if the goals have been met. It is expected for at least two students to get 100% scores on the post-survey questions.

Activities include erasing plaque from laminated sheets of teeth, brushing and flossing on typodonts, interactive learning with Kahoot, and a poster board presentation. Materials needed are toothbrushes, floss, typodonts, a posterboard, laminated sheets, teeth printed on paper, and dry-erase markers to draw on biofilm. Each member of the group will be responsible for overseeing one table of students each during the activities. Students will be taught the correct methods after demonstrating their own skills in each task. After learning the proper techniques, students should implement these methods at home. Students should also share their new knowledge with their family and friends.

Evaluation:

To evaluate the students' understanding of our project, we need the right tools to measure the efficacy of the goal. A pre-survey questionnaire was done by asking how many of them know how to floss and brush properly, what a mouth guard is, and what vaping/smoking is and what it does to your oral health. At the end of the presentation and activities, a post-survey questionnaire was done by asking how many of them feel confident brushing/flossing and a Kahoot quiz to examine how much they learned after today's demonstration. To evaluate if the students grasped the idea of the importance of removing biofilm from teeth, they were given photos of teeth covered in "biofilm", and they were assigned to identify the surfaces that needed to be cleaned. Also, students showed "Tell, Show, Do" on typodonts, they learned the modified bass method, traditional flossing technique, and floss pick technique. The pre-survey results showed that out of 20 students, 2 students got all 5 questions right. The post-survey indicated that 11 students got all 5 questions right. We concluded that the majority of students were knowledgeable and able to remove all "biofilm" from photos and correctly showed the flossing technique, floss pick technique, and modified bass method.

Conclusion:

Overall, the students were able to correct, improve, and develop their knowledge in proper oral homecare, the effects of vaping, and the importance of mouthguards. According to the results obtained from the surveys and manual activities, our expectations of the students' understanding were met. They were able to answer the questions on the post-surveys more accurately than before indicating that they had learned from the presentations. Students were also able to mimic the correct techniques of brushing and using interdental aids. This improvement reflects our project's goals and efforts in increasing the students' confidence in dental hygiene. We strive to positively influence the students to become more aware, educated, and motivated to protect their teeth, and in turn their overall health.

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