Benefits of Mouth Rinse and Prevention of Cavities

Presented by: Waleed Ahmad, Sonny Rong, Helena Huang, Ashley Tan, Cho Rok Hwang, Manal Elder

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**Introduction**

This report will highlight some of the valuable information we gained from the community outreach project. It was a wonderful learning opportunity for us all. Not only were we able to educate students on the significant use of mouthrinse, but we gained constructive learning experience in the public health setting. We did this through visiting an after-school program in M.S 202, located in Ozone Park, Queens.

One of the main purpose of this project was to promote middle-school aged children to understand the importance of good oral health. We discussed how it is important to have a clean mouth, which is attainable through collective use of brushing, flossing and rinsing with adequate plaque removal. We further emphasized the use of mouthwash because it is something that is not time-consuming and at the same time is easier to help explain the significance of. The population we presented our project to were pre-teenagers who simply weren’t too interested about their oral hygiene. We felt this would be a baby-step to help them understand and get them started onto the right direction of proper homecare.

The presentation focused on using fluoridated mouthwash daily to prevent dental caries. We incorporated valid information from multiple sources throughout the presentation and involved the audience in open-ended participation. Published literature review suggests that fluoridated mouthwashes contain fluoride in various forms as either sodium fluoride (NaF) or acidulated phosphate fluoride (APF). They promote remineralization of enamel with fluorapatite and fluorhydroxyapatite, making enamel resistant to acid attack caused by carbohydrate (sugar) breakdown. Hence, they are extremely useful in patients with high risk of dental caries, which a lot of the participating students were; based on our Q&A session. In addition, this opportunity allowed us to grow our knowledge of what we learn in the classroom and apply it to the real-world community settings.

**Assessment**

Our target population was twenty middle school children around 11-12 years old, that consisted a random sample of boys and girls on the soccer team. The presentation was conducted in a classroom with the availability of a smartboard and internet access. Since screening was not involved in our project, a questionnaire was utilized to assess the children’s oral health knowledge and practices. Before we began our presentation, we handed out a survey questionnaire for them to answer. The questionnaire consisted of seven close-ended questions generally pertaining to their oral hygiene regimen and their exposure and frequency of dental visits. Out of twenty students, only one student has never visited the dentist. Additionally, roughly eleven out of twenty students do the recommended regimen of brushing twice a day for two minutes, but the other half don’t. This is the same with flossing, only half the students floss once a day. As for mouth rinses, about eighteen out of twenty students use it. Overall, the majority of students in the survey were aware of good oral hygiene practices.

Since our presentation is primarily on the benefits of fluoride, we briefly asked with a show of hands how many of them know or heard of the word ‘fluoride’. Most students were not aware of what fluoride is and the benefits it has of preventing tooth decay. The assessment of knowledge is essential as knowledge means that the individual understands what oral disease is and how it arises. According to the literature, it has been proven that the use of fluoride is an effective measure in promoting remineralization. It is also important to understand the protective measures that need to be assured. Thus, in the case of dental caries, the individual knows for example that using fluoridated rinse is a prevention for tooth decay. This information generates a positive attitude toward applying this in their daily oral hygiene regime.

**Planning**

Main goal of the project was to assess students’ oral health knowledge behaviour and to

educate them on importance of mouthrinse and protection of dental cavities. We used two different research method; a qualitative data collection via anonymous survey and a quantitative self evaluating post-presentation quiz.

Anonymous survey was utilized prior to our presentation. By giving the survey prior to presentation, we were able to understand students’ oral health knowledge behaviour. Based on the survey, there were few students who needed to improve daily oral hygiene routines even though majority of the students were well aware of good oral hygiene practices. Since many students were also using mouthrinse, we emphasized the concept of fluoride and how fluoride contained mouthrinse works to prevent tooth decay. There were twenty students in total; 4 girls and 16 boys, age range from 11 to 12 year-olds.

A short Youtube video was presented to have the students’ attention followed by a twenty minute presentation explaining how cavities develop and how fluoride contained mouthrinse can be beneficial preventing the dental cavities. We mostly focused on visual education program along with informative speech.

A post-presentation quiz was distributed to assess how much information the children had obtained from the our presentation. It contained a set of five questions based on our presentation. It was a self grading quiz and we did not collect them to grade. Instead, we went over each question and a small prize as a positive reinforcement for participating or answering the correct answer to each question was given to the children. We were able to see the effectiveness of the presentation by having them participate and to answer each question. Many students participated to answer and to receive the prize. We were very satisfied with the students’ participation. Most of the students answered the question correctly.

**Implementation**

The presentation was presented in one of the classrooms in the school using a computer with internet access and a smart board. We arranged the seats in a circle so that everyone is able to see the screen and this arrangement gives us more room to perform our presentation. We prepared a powerpoint presentation for the class along with some games and two Youtube videos pertaining to mouth rinses and how they prevent cavities. One of the videos is a clip from the cartoon, “Teen Titans” that mentioned cavities and how to prevent them by brushing in a comical way. The second video shows the scientific research and studies regarding how effective mouth rinses are in preventing cavities for illustrative purposes as children retain information better with visual learning.

Furthermore, in our powerpoint we included pictures and diagrams about the tooth structure and areas where cavities are formed. This shows the audience what we are talking about which helps them visualize the concepts. As for games and fun activities to spark their interest, we played “Two truths and one Lie” as an icebreaker to get the audience more comfortable to talk. After the powerpoint presentation, we gave the students a mini quiz that reflects what was taught to test our teaching effectiveness. Also, we gave the students an opportunity to receive prizes if they answered dental related trivia questions correctly or if they attempted to get it right. We ended the presentation by instructing them to use the provided mouth rinse, Listerine Anticavity once a day as homework.

**Evaluation**

Evaluation is a process that crucially involves collecting and analyzing information about a programs activity. It is important to periodically assess and adapt our activities to ensure that it is effective and can positively impact others. Evaluation helps enable us to demonstrate our activities success and progress. It helps us determine what our strengths and weaknesses are.

The tools that were needed to evaluate were both a pre and post quiz. The pre quiz was given to the students prior to the lesson for them to give us a better understanding on how much the students knew about oral health mouth rinses. After the lesson, the students were given a post quiz to test them on how much they have learned about what they were taught. This technique was a good way to help us measure effectiveness and it showed that the students learned a lot from what our group has presented. We received positive post- quiz results compared to the initial pre quiz. Good decision making depends on good information. Valuable information was conveyed to the students. Our information showed that the students put in effort into what was being taught to them and developed a better understanding of oral health. This helped determine our success rate and proves that our goal that was initially planned was accomplished.

The teacher was impressed with our group and how much he, himself had learned too. He offered us an opportunity to come back and present again to an additional group of students. We also received more positive feedback, we were told that the students now developed a change in behavior, but in a positive way. The students now make sure to always keep up with their oral hygiene and had even taken the time to take the information they were taught and passed that information to their family and friends. They had informed others about the importance of fluoride mouth rinse and other ways to improve oral health.

**Conclusion:**

To conclude, fluoride plays a significant role in the prevention of caries and improving oral health. The prevention of tooth decay in children and adolescents is regarded as a priority for dental services. Not only does fluoride prevent cavities by building stronger enamel and promoting remineralization but also, promoting healthy gums. Plaque buildup between teeth can be a problem for those who don’t floss, but using fluoridated mouth rinse can help prevent buildup of plaque in areas that are hard to reach, although it cannot reduce the plaque that already exists in your mouth. Therefore it only acts as an adjunct to their daily oral regimen and does not replace tooth brushing or flossing.

Mouth rinses are not recommended to be used in children under 6 years old unless with supervision of a parent and highly recommended by the doctor. The reason for this is because the children may accidentally swallow it which can be toxic or their ability to swish and spit the mouth rinse is not well enough for it to be effective.

There are many different types and brands of mouth rinses in the market, which can be confusing due to the various colors and assortments on display. Some may be used for cosmetic and some may be for therapeutic purposes. Cosmetic mouthrinses may only have properties for whitening or controlling halitosis. Therapeutic mouthrinses contain specific active ingredients that help control or reduce conditions like gingivitis or tooth decay. If using the right one and the recommended once or twice per day, it can keep the children’s mouth cavity free and avoid many invasive dental visits for fillings and saving you a great deal of money. The current recommended procedure involves rinsing twice a day with 10 mL of .2% Sodium Fluoride for 60 seconds. If for instance you do not know which mouth rinse to use for your children, a dental hygienist or dentist may recommend one that is perfect for your child.

**References**

Memarpour M, Dadaein S, Fakhraei E, Vossoughi M. Comparison of Oral Health Education and Fluoride Varnish to Prevent Early Childhood Caries: A Randomized Clinical Trial. Caries Res 2016;50:433-442

Parashar, Amit. Mouthwashes and Their Use in Different Oral Conditions. Sch. J. Dent. Sci., 2015; 2(2B):186-191.

http://martindaledental.com/4-benefits-of-using-mouthwash/