NEW YORK CITY COLLEGE OF TECHNOLOGY

DENTAL HYGIENE DEPARTMENT

DEN 2413 – Introduction to Public Health

Service Learning Field Project

Participation Form 2018

Your Name: **Tatiana Shchedrina.**

Name of the Site: XO Creperie & Lounge

Address of the Site: 2027 Emmons Avenue, Brooklyn, NY, 11235

Date of Visit: 03/04/2018

Group Members: Elena Sedova, Seonyeong Ahn, Katherine Martinez, Tatiana Shchedrina.

Your Responsibilities:

* **Written Report:**

Shchedrina T.: assessment, lesson plan, survey written for the target group.

Ahn S.: introduction, planning.

Sedova E.: evaluation, literature.

Martinez K.: implementation, conclusion.

* **Oral Presentation:**

Shchedrina T.: organization of presentation, education about use of electric toothbrush and floss. Teaching a group of 3 people oral hygiene.

Ahn S.: oral hygiene instructions about use of manual tooth brushes. Teaching a group of 3 people oral hygiene.

Sedova E.: education about periodontitis. Teaching a group of 3 people oral hygiene.

Martinez K.: oral rinses. Teaching a group of 3 people oral hygiene.

**LESSON PLAN**

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| --- | --- | --- | --- |
| **Session Title** | **Prevention and management of periodontal disease** | | |
| **Objective(s)** | Participants will be able to – understand what periodontal disease is, and how to manage this condition practicing good oral hygiene. | | |
| **Activity** | Time | Tasks | Materials |
| **Ice Breaker/ Prior Knowledge** | 5 min. | Survey about oral health. | Printed survey containing 10 questions. |
| **Direct Instruction** | 40 min. | Education about periodontal disease. Education of tooth brushing with manual and electric toothbrush, flossing. | Listesine, Colgate, and Oral-B pamphlets. |
| **Whole Group Practice** | 20 min. | Education about different tools that can be used to prevent and manage periodontal disease | Colgate website, different interdental aids, mouth rinses. |
| **Individual or Pair Share** | 20 min. | Each student educate 3 workers how to use interdental aids and answer their questions. | Toothbrush, typodont, floss. |
| **Review** | 5 min. | Summary about importance of good oral hygiene. |  |
| **Assigning Homework** | 5 min. | Homework for the target group is changing behavior toward good and stable oral hygiene for the rest of their life. | Samples of toothpaste, toothbrush, floss, mouth rinse. |
| **Session Feedback or Q & A** | 10 min. | Students are able to answer the questions. |  |

Please type/write a short description for what will be covered in your session here:

**INTRODUCTION**

We as a group had an amazing opportunity to meet and educate diverse people on a topic that we are confident on. Our topic was about prevention and management of periodontal disease. By doing a quick survey of the target population, we got to learn about the population we were going to be educating. The target population was a group of 12 white males, between the age of 20 and 40 years old, who were currently employed in the restaurant business. We also found out that many people did not have a dental home. We took the chance and started to explain to people what periodontal disease is.

According to the International Journal of Health Sciences, in the article Prevalence of periodontal disease, its association with systemic diseases and prevention, periodontal disease is a chronic inflammatory condition characterized by the loss of periodontal ligament and alveolar bone. It can start as gingivitis which is reversible and progress into periodontitis which is irreversible. According to the BMC Oral Health article Detection and diagnosis of periodontal conditions amenable to prevention, Preshaw describes periodontal disease can be detected by various types of assessments such as clinical examination, periodontal probing, radiographic assessment, recession and tooth mobility. Not only it is important to know and detect the disease, but it is also critical to know how to prevent and manage the disease.

To prevent and manage periodontal disease, we recommended both soft bristle manual toothbrush and electric toothbrush. Removing the plaque and debris from the tooth surface is critical and is the first most important step. The reason why we recommended electric toothbrushes was because according to a study done on Powered versus manual toothbrushing for oral health in the Cochrane Database of Systemic Reviews, the research has shown powered toothbrushes reduce plaque and gingivitis more than manual tooth brushing both short and long term. We emphasized the importance of keeping the oral cavity healthy and how it is related to systemic condition.

At the end of the presentation, we made sure people understood our topic clearly by using another quick short survey. We gave out some samples that can benefit the population for good oral hygiene and suggested visiting our clinic.

**LITERARURE REVIEW**

1. Nazir MA. Prevalence of periodontal disease, its association with systemic diseases and prevention. International Journal of Health Sciences. 2017;11(2):72-80.

2. Preshaw PM. Detection and diagnosis of periodontal conditions amenable to prevention. BMC Oral Health. 2015; 15 (Suppl 1): S5. Doi:10.1186/1472-6831-15-S1-S5.

3. Yaacob M, Worthington HV, Dean SA, Deery C, Walmsley AD. Povered versus manual toothbrushing for oral health. Cochrane Database of Systemic Reviews. 2014; 6.

4. Colgate professional website. Available at: <https://www.colgateprofessional.com/dental-indications>

5. Oral Health Group. (2018). Oral Rinses For Periodontal Health: Simplified - Oral Health Group. [online] Available at: https: //www.oralhealthgroup.com/features/oral-rinses-for-periodontal-health-simplified/ [Accessed 20 Mar. 2018].

6. Prevention. (2018). 23 Ways To Stop Gum Disease. [online] Available at: https://www.prevention.com/health/23-ways-to-stop-gum-disease [Accessed 20 Mar. 2018].

7. Ada.org. (2018). Education and Careers. [online] Available at: https://www.ada.org/en/education-careers [Accessed 20 Mar. 2018].

**ASSESSMENT**

The target population for this project was a group of 12 white males in the age range between 20 and 40 years old working in the restaurant business. Eight out of twelve people didn’t have any dental insurance or a dental home. After completion of a survey in the form of a simple printed questionnaire containing ten basic questions about oral health, we discovered the following; four out of twelve people were interested in dental hygiene services; ten people described their oral status as fair to bad, stated that they need to see a dentist but because of lack of insurance or absence of free time they delayed making an appointment. Ten people stated that their gums were bleeding sometimes while brushing, majority of the time they were pressing too hard on the toothbrush or when they changed to a new brush. Six people reported that their teeth are sensitive to cold and hot food and beverages. None of the individuals reported that they lost any teeth during the past twenty-four month because of periodontal disease.

As a group we decided to talk and educate the target population about prevention and management of periodontal disease. According to the CDC’s 2009-2010 National Health and Nutrition Survey, 47.2% of US population at the age of 30 and older have some form of periodontal disease.

Periodontal disease is a chronic inflammatory condition characterized by the loss of periodontal ligament and alveolar bone. It is the main cause of tooth loss and considered one of two major problems in the oral health. This condition cannot be healed but can be prevented. According to statistics and our target group age, we decided that education about prevention and management of periodontal disease will be beneficial for them.

**PLANNING**

As a group we talked and educated the target population about prevention and management of periodontal disease. We planned to set up some steps in introducing them about our topic. We established priorities as first step in planning. In this population, we were not aware if people had periodontal disease or not, so we thought educating and explaining to them about what periodontal disease is and how to prevent would be important first priority. We used our knowledge to explain them specifically about what periodontal disease is. Based on our objective findings, ten people stated that their gums bleed sometimes while brushing so we explained them how gingivitis can turn into periodontal disease if left untreated, what causes periodontal disease and how it progress.

Next, our main goal was to introduce and demonstrate how to prevent the emersion of the periodontal disease. We prepared and used the models and toothbrush to show them how to brush correctly in order to prevent periodontal disease. We specifically showed and demonstrated modified bass brushing technique with soft bristle toothbrush. Also, we had people to try the brushing on models and had them demonstrate it back to us how they learned brushing technique. In addition to that, we prepared two different types of floss, one with waxed and one without waxed. We demonstrated and instructed them how to correctly use floss. Our team explained how they can benefit themselves from using floss every day and it is one of the important oral hygiene tool to prevent periodontal disease. Another part of plan on our presentation was educating the target group how to use electric toothbrush in order to prevent and manage periodontal disease. According to Oral B’s research, it was proven that oscillating-rotating electric toothbrushes is superior to manual toothbrush in removing plaque more effectively. In addition to that, electric toothbrushes do not require certain angles to remove plaque efficiently which can benefit people who struggle with applying correct angulation. We also planned to introduce and demonstrate people to use Colgate website which is very efficient in showing them where they are not brushing enough and what part of the mouth they need to focus and spend more time brushing.

Finally, we prepared samples of toothbrush, toothpaste, floss and mouth rinse to give to the target group at the end of our presentation. We explained to them how antiseptic mouthrinses are an important part of oral hygiene and can help keep up good oral health and to reduce and decrease gingival inflammation. Lastly, we explained that the teeth make up only 25% of the oral cavity and in order to keep and maintain good oral health, it is essential to brush, floss, and rinse daily.

**IMPLEMENTATION**

First, we interviewed our target population. Then, we proceeded with the use of brochures to explain what periodontal disease is and how we can prevent it by brushing and flossing. We explained how gingivitis can progress to periodontitis. The concept that gingivitis is reversible compared to periodontitis that is irreversible was clearly understood. We emphasized that good oral hygiene will do a tremendous job on preventing the gingival tissue from bleeding and becoming inflamed. Poor home care and not visiting a dentist can bring patients to periodontitis and cause bone and tooth loss. Since, 10 workers stated that their gums bleed when they brush the teeth, we questioned them on how they brush and how often. 7 out 10 specified that they brush two times a day using strong back and forth strokes. None uses dental floss or mouth rinses. They thought brushing with a toothpaste was enough.

Second, after this questionnaire on oral hygiene, we moved to patient education. To fully cover this topic, we used our typodonts, toothbrushes and dental floss. We divided in small groups and showed the workers the modified bass tooth-brushing technique. Angulation, short strokes and time for brushing was discussed. They understood that they should brush their teeth two times per day every day for two minutes. If they don’t do it for that amount of time, their brushing is weak, and the mouth will not get as much improvement. We also advised them that their toothbrushes should be one with soft bristles to avoid gingival recession. Dental flossing technique was also shown in the typodont. A lot of them asked us questions saying that they don’t floss because they bleed more. We educated them that floss doesn’t make their gingiva bleed, but plaque does. Also, the bleeding will decrease and stop if they floss daily. We provided samples of toothpaste, soft bristle toothbrush, dental floss, and Listerine antiseptic. They seemed excited to try these products. We recommended Listerine antiseptic as a mouth rinse because it is proven to kill 99% of bacteria from the oral cavity.

Third, we introduced the Colgate website. This is a great website for the patient education and for everyone who want to control the time when brushing to reach two minutes and to monitor the surfaces that should be brushed. The use of an electric toothbrush was also discussed with the target population because it is more efficient on removing plaque than manual toothbrushes and doesn’t required certain level of dexterity. Our group suggested Oral B powered toothbrush with pressure sensor since studies had proven superior plaque removal over manual toothbrushes. At the end of the presentation and activities, the target population gathered all important information provided and promised to apply it on a daily basis. They were able to ask questions and get answers in form they could understand.

**EVALUATION**

When evaluating the process of delivering oral health information, we have to ensure that the recipients understand and use this information to promote their oral health and prevent and manage periodontal disease.

In our project, there were three main parts that we used to deliver our topic and evaluate our work. The first one was informing the people that, according to the American Dental Association, they can help prevent gum disease by brushing twice a day and cleaning once a day between the teeth with floss or an interdental cleaner. We delivered this information using the simple terms and basic tools, such as floss, toothbrushes, rinse samples, dental hygiene brochures and the Colgate website.

The second part of our project involved guiding the people into action. We demonstrated the toothbrushing and flossing techniques using dental typodonts. We explained that there are many tools available, both mechanical and chemotherapeutic, to maintain periodontal health, but that only 25% of the oral environment consists of tooth structure. This is why it is essential to use oral rinses in order to prevent or manage gingivitis and periodontal disease. Oral rinsing is a patient-friendly, minimally invasive way to proactively control the complex inflammatory cycle.

The third part of our project involved motivating people. As we all know, changing behavior is very challenging, especially for adults. Changing old habits is nearly impossible without motivation. Introducing the Colgate website helped us to show brushing techniques in a way that involved the participants by letting them see a model of their own teeth and motivating them to brush better and longer in the difficult areas. We also dispensed sample bags with supplies, such as brushes, toothpaste, flosses, and rinses.

At the end of our presentation, we got many questions from our audience. We tried to answer all of their queries regarding gum and periodontal disease. We were satisfied to see such keen interest in this topic from our participants. Because of these tools that we used during the presentation, we can be assured people were motivated to change their oral hygiene behavior for the better and, in turn, hopefully change their future health.

**CONCLUSION**

Plaque and bacteria can be accumulated in the mouth and if not removed properly, can transform into gingivitis. As we all know gingivitis is reversible. Having good oral home care and visiting the dentist every 6 months can help us go back to healthy gums. Periodontitis is irreversible, however, it can be managed. Once periodontal disease is diagnosed, we can't go back to gingivitis. We will have to visit the dentist and hygienist more frequently to evaluate the severity and control of bone loss.

In conclusion it was a great opportunity and project because we had the chance to educate this population about periodontal disease, which is a major cause for tooth loss in the United States. The target population gathered all the important information and promised to apply it to their daily oral care routine. They were interested in our topic and demonstration of the new brushing and flossing techniques. Now, these individuals cannot only have this information for themselves, but also pass it around to their family members.

As a team we accomplished our objective goals. We evaluated our presentation by questionnaires. Our topic was effective because the target population were able to answer our questions after the presentation. We invited them to our dental hygiene clinic and we are expecting for them to come so they can receive good oral hygiene services and education. We explained to them that oral diseases can't be diagnosed by the naked eye. We will need more assessments to collect the proper information in regards to the status of their oral health. We hope that the target population were motivated to visit a dental office or at least our clinic for dental and periodontal evaluation and treatment.

***Prior to presentation survey***

1. What is your age?

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2. How would you describe your current dental health?

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3. Date of your last dental exam?

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4. What was done at that time?

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5. Do your gums bleed when you brush? If yes, how often?

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6. Are your teeth sensitive to cold, sweet, or pressure?

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7. Have you had any periodontal (gum) treatment?

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8. Do you use any interdental aids (Ex. floss, interdental brush), if yes, how often?

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9. Do you use any oral rinses, if yes, how often?

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10. What type of toothbrush do you use?

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