Tiny Steps for Tiny Smiles

Oral Health Education For Children and Adolescents

Group Members: Marwah Nur, Islam Abdallah, Suzana Hossain, Medina Ferozedin, Milagros Lugo, Raneem Mohamed

Table of Contents

Introduction

1.1 Background and Content

Early childhood is a formative age for developing oral hygiene habits. It is important that young children are educated on proper practices of toothbrushing and other interdental aids to prevent the risk of early childhood caries. Lack of education to the younger population on oral hygiene can eventually lead to more serious and costly consequences in the permanent dentition. Children can have premature tooth loss due to early childhood caries which disrupts eruption patterns of the normal dentition leading to crowding or malalignment of permanent teeth.

One of our many roles as dental hygienists includes education, not just scaling and root planing. We have the great opportunity to discuss with our patients their daily oral hygiene habits and provide early intervention through education and hands-on demonstrations.

1.2 Literature Review

Current literature review highlights that the attitudes and concerns most common among the younger population in regards to oral health are understood. In the 2021 article "Children's Attitudes and Behaviors about Oral Health and Dental Practices," the importance of education and outreach was emphasized. The article found "Fear and anxiety toward dental issues and going to the dentist affects a considerable proportion of children and adolescents"[1], which was very concerning as oral healthcare workers because if the general population has negative conceptions about dental settings, it will inevitably cause an increase in caries and other oral health concerns, due to avoidance and general fear. However, the article also discusses the cause and possible solutions to address the negative attitudes. The authors write, "Children's attitudes and behaviors toward healthcare are globally negative and discriminatory and are guided by the

lack of education and biased beliefs. Providing children with information about health promotion is expected to afford greater recognition, understanding and more healthy and positive behaviors." This information fueled our community outreach project to target misconceptions that the young population may have been exposed to from either parents or social media.

Assessment

2.1 Identifying Target Population

We were able to assess our target population through research and gathering data from peer reviewed articles. Various articles demonstrated the prevalence of negative attitudes and misconceptions of oral health in children and adolescents motivating our project to target this population. Childhood beliefs shape and influence our attitudes into adulthood, which is why it is vital to combat the stereotypes with positive education and community outreach projects. In addition, the young children and adolescent population are very adaptive and learn quickly, providing a great opportunity to start implementing healthy oral hygiene habits and attitudes. Early intervention is key.

2.2 Oral Health Status/ Needs

The 2020 article "Dental caries in primary and permanent teeth in children's worldwide, 1995 to 2019: a systematic review and meta-analysis" found that "the prevalence of dental caries in primary teeth in children in the world with a sample size of 80,405 was 46.2% (95% CI: 41.6–50.8%), and the prevalence of dental caries in permanent teeth in children in the world with a sample size of 1,454,871 was 53.8% (95% CI: 50–57.5%)"[2]. This statistic is alarming because almost half of children with primary teeth have caries and more than half of children with permanent teeth present with caries. The oral healthcare status among children and adolescents is clearly unsatisfactory and could even be classified as an oral health issue on a global scale, due

to the statistical evidence and high caries rate. There is an urgent need for early childhood education on oral hygiene to prevent the widespread caries issue and alarming lack of awareness regarding oral health.

Planning

3.1 Goals and Measurable Objectives

The specific goal of the project was to provide education to children and adolescents through an interactive and hands on presentation. The measurable objectives applied to this project was a pre-assessment questionnaire and post-assessment questionnaire based on the educational and hands-on demonstrations. The main objective of the pre-/post-assessment questionnaire was to determine if the children and adolescents were able to improve their knowledge and understanding of oral health care by earning a higher score on the same questions. This increase in score would demonstrate that the target population was able to gain a more positive education on oral health care. A reflection on the children's overall attitude on oral care was taken before and after the presentation to gather insight into any change in perception of oral healthcare.

3.2 Developing Promotion/Education Programs

The development of this educational program included identifying which setting would be most appropriate. One criteria for our project was a location that was positive and a safe space where children felt comfortable. We promoted the program by explaining the benefits and activities that would take place including prizes for the kids.

3.3 Process of Development and Alternatives

The process of creating an educational program for our target population of children and adolescents was essential because it needed to cater to that community and be effective in meeting our goals. To create this education program our group scouted a location that was a

community center and a place where children and adolescents gathered regularly. A Sunday school was an ideal location because the age ranged from children to adolescents and also the setting of the Sunday school was less formal. The children were in a more comfortable environment rather than a structured one, such as a school which might have perhaps created a space where they are being forced to take a “quiz” or “learn”. The Sunday School setting for education was a way to make the educational program more of an interactive activity to combat the negative misconceptions and stereotypes of oral health care as painful or boring.

Implementation

4.1 How Goals/Objectives Were Reached

The goals and objectives for our project were met throughout the pre/post questionnaire but also the hands-on activity after the tell/show/do. The periodic breaks and testing with the short quiz allowed us to keep track of the progress and educational gains of the oral presentation.

4.2 Tools and Program Presentation and Location

The materials that were utilized to meet these expectations was the oral presentation on basic oral health information including healthy food options versus unhealthy food options, causes of caries, at-home oral health care, and the frequency of visits to dental care providers. The presentation also included two short videos that went over the same oral health information along with stimulating visuals in a format with which the children can be engaged. We presented the program in a community Sunday class for children and adolescents. The presentation was made possible with the use of a portable projector for a wider, easily-seen projection and a laptop to navigate the presentation and videos. The children sat on the carpeted floor around the projector screen in an informal and “community” type of circle instead of traditional tables and chairs. In addition, the tell-show-do method of circular toothbrushing and flossing was done in small

groups with a ratio of one student clinician to 4-5 children. This allowed for a more personal interaction with each child and hands-on training to improve their ability to perform toothbrushing and flossing. Furthermore, the use of the tell-show-do technique was applied into the education program because it has been shown by peer-reviewed studies to reduce anxiety among children. In the article "Evaluation of the effectiveness of tell-show-do and ask-tell-ask in the management of dental fear and anxiety: a double-blinded randomized control trial," an experiment testing the use of this teaching style found that children demonstrated positive behavior and reduced anxiety levels.[3]

Evaluation

5.1 Program Accomplishments/Improvements

The program was successful in increasing the education of young children and adolescents on oral health, while also changing the adverse attitudes and perceptions of oral care. From the educational quiz, we were able to see a measurable increase in oral healthcare knowledge. The pre-assessment questionnaire had an average score of 70%, while the post-assessment questionnaire averaged 90-100%. In addition, the children were asked to share their experience and their overall new attitude about dental health at the end of the program in comparison to the beginning of the program. There was a trend of a more positive outlook and perception of dental health. The children shared that they felt more comfortable in seeing their dental provider and were actually more motivated to stay consistent with their daily dental hygiene routine. One limitation of this program was having a less diverse group of children because due to the location of the program being in a Sunday class which was for religious purposes the population was mostly just children from the Islamic faith. This factor may have influenced or caused some type of bias in the children's attitude or response. For example, some children attested that they never

interacted with a dentist or hygienist that looked or dressed the same as them which could cause some of the fear or anxiety with which they associate dental care. Hence, choosing a location that has a more diverse target population could allow for more inclusivity.

Conclusion

6.1 Reflection

The educational program provided our group with a great opportunity to practice our skills in communication and also in the real world . The Sunday School facility was an interesting and rewarding location to conduct the program in because the children were very enthusiastic and excited to receive a presentation. This field work inspired our group to reach out to more minority populations that may not get these community services regularly. It opened our eyes to the urgency of the situation and the reality of children's and adolescent’s oral care needs. The program reinforced the idea that dental hygienists play a huge role in combating the negative attitudes in dental care.

References

1. Fernandes SC, Louceiro A, Lopes LB, Esteves F, Arriaga P. Children's Attitudes and Behaviors about Oral Health and Dental Practices. *Healthcare*. 2021;9(4):416. doi:https://doi.org/10.3390/healthcare9040416

2. Kazeminia M, Abdi A, Shohaimi S, et al. Dental caries in primary and permanent teeth in children's worldwide, 1995 to 2019: a systematic review and meta-analysis. *Head & Face Medicine*. 2020;16(1). doi:https://doi.org/10.1186/s13005-020-00237-z

3. Niharika Reddy Elicherla, Kanamarlapudi Venkata Saikiran, Karthik Anchala, Sainath Reddy Elicherla, Sivakumar Nuvvula. Evaluation of the effectiveness of tell-show-do and ask-tell-ask in the management of dental fear and anxiety: a double-blinded randomized control trial. *Journal of Dental Anesthesia and Pain Medicine*. 2024;24(1):57-57. doi:https://doi.org/10.17245/jdapm.2024.24.1.57