The Effect of Providing a Physical/ Nutrition and Oral Health Education Program for School-Aged Children/Adolescents in an After-School Setting

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Abstract

The purpose of this study is to explore The Effect of Providing a Physical/ Nutrition and Oral Health Education Program for school-aged children/adolescents in an after-school setting. The study will address the impact of the children's physical activity knowledge, nutritional knowledge, healthy food choices, and oral health knowledge. A controlled experiment is used where proposed research participants will be divided into two groups, a control group and an interventional group. In the control group, participants will not participate in the physical/ nutritional and oral health education program, while the intervention group will participate in the program. The instruments utilized consist of The School Physical Activity and Nutrition Questionnaire (SPAN) and Oral Health Questionnaire. Analyzes of covariance will be exercised to compare control versus intervention group students' post-intervention scores on the two measures with the students' pretest score as the covariate. The results should indicate that, compared to the control group, students who participated in the Nutrition/ Oral Health Education and Physical Activity Program, will significantly have higher levels of physical activity, nutrition knowledge as well as better attitudes about food and eating, and proper oral health care. Limitations of this study may be attributed to lack of community, parents' and guardians' involvement. Hopefully, this program will contribute to students' attentiveness of proper eating habits, proper oral health care, and the benefits of regular daily exercise.

Keywords: Health Education, Health Promotion, Early childhood nutrition-education, obesity and child health

Introduction

Current and Pertinent Educational Information on Dental Care

Dental health is a very important and integral part of health because it affects the entire individual According to the World Health Organization (WHO), "Oral health is part of total health and essential to quality of life in addition, global goals for oral health by the year 2020 are specified for development of quality of oral health systems (2014, para. 6). As stated by Wiener, Crout and Wiener (2009), between 1999 and 2004, the national dental caries percentage in children age 2-5 was about 28% and the predominance of permanent teeth decay was 21% among children 6 to 11 years. Wiener, Crout and Wiener, writes

> "Poor oral health in children has many serious sequelae. Children with untreated caries may have difficulty chewing and may not take sufficient nutrients to grow and develop to their full potential. Without proper nutrition, and with the presence of oral pain, children may show difficulty with concentration and learning" (2009, P. 141).

The above mentioned point is very important and emphasizes the fact that dental hygiene and dental health is an integral component of health that requires much attention as any other part of the body. Other adverse consequences of poor dental health include and not limited to low self-esteem which can result from discolored appearance of the carious teeth, from loss of decayed tooth and even death from untreated advance dental caries (Wiener, Crout and Wiener, 2009).

Dental caries is a concern affecting childhood and children growing permanent teeth. There has been increase efforts to educate parents and guardians regarding dental caries. This includes public announcements especially in the month of February where tooth paste commercials will demonstrates proper mouth care by brushing twice a day, flossing daily, and gargling. These aforementioned consequences can be avoided if programs are implemented both at school and at home to prevent and combat dental health issues.

The American Academy of Pediatric Dentistry suggest that, "an infant have a dental home with a dental professional and a thorough oral evaluation by one year of age to help in the provision of effective home care" (Wiener, Crout and Wiener, 2009, p. 141). This would be an important antecedence to set because it would set the pace for further visit when a child would really need dental care. On the part of the provider, there is a baseline data regarding the condition of the oral health to which the subsequent changes can be compared to.

Specialization like distribution of labor enhances efficiency and improvement in patient care. In most young children, care is provided by the pediatrician, who is knowledgeable in the prevention and treatment of diseases. Most of these pediatricians are not equipped with the complete knowledge needed for oral health care. Therefore, a Certified Pediatric Dentist (CPDs) is imperative to the health team. There is an inclination to used Certified Pediatric Dentist as against dental General Practitioners (GPs). This is because certified pediatric dentist approach care from a preventive point of view while dental general practitioner are more into treatment. In a research by Levin and Ashkenazi (2008) to appraise the oral health behavior and knowledge of preventive measure of 442 young Israelite adults, the researcher utilizes the oral questionnaire to gather data about the impact of the dentist on their patients. The questionnaire included periodic monitor follow up visits, dentist certification, protective measure by dentist to patients, (tooth brushing and flossing, eating habits) and fluoride used and past dental practice. The researcher found that, "52.2% reported being treated regularly by general practitioners, 10% by CPDs and 34.6% were treated irregularly by GPs ". The result showed that, the proportion of subjects who provided accurate responses were greater in subjects who conveyed being treated frequently by CPDs equated to subjects treated frequently by GPs and was greater in subjects treated commonly compared to those treated intermittently by GPs. More subjects who testified being treated recurrently by CPDs also reported that their dentist clarified the essential to decrease the number of meals.

According to Levin and Ashkenazi (2008) a significant duty for a dentist is to inculcate accurate oral habits to stop oral diseases. The first stage in starting a habit is to provide pertinent information to the patient and to elevate his or her consciousness to avert oral diseases.

In a study by Amin and Al-Abad (2008) to evaluate the rate of ingesting cariogenic foods, oral hygiene performances and dental health awareness in the midst of Saudi male elementary school age children (10-14years) in relation to socio demographics and to discover the probable predictors for dental caries among them.

A cross sectional study was conducted that followed 1115 participants randomly selected from 18 public elementary schools where data was collected via use of interview by closed ended questionnaire regarding frequency consumption of some cariogenic foods, oral health practices and dental knowledge. The researcher found that,

> The clinically decayed tooth was diagnose in 68.9% of the included children, more in urban and younger students. Caries affected the subjects consumed cariogenic foods at greater frequency compare with caries- free children. Only 24.5% of the student brushing their teeth twice or more per day, and 29% of them never received instruction regarding oral practices. Miswak as an alternative and /or additional method of dental cleaning was used by 44.6% (Amin an Al-Abad, 2008, p. 361).

The meager oral hygiene performances, deficiency of parental direction and suitable dental health information with regular exposure to cariogenic foods in accumulation to socio demographics are the key risk influences for dental decay amongst the surveyed students. Dental caries stood considerably greater among students with inferior parental educational status, high maternal illiteracy, and grouping of paternal education lower than secondary school level. Student with dental lesion had less working mothers and who belong to big sized families [greater than 6 per family] (Amin and Al-Abad, 2008).

Yuen et al., (2008) study titled "Dental Health Knowledge in a Group of Black Adolescents Living in Rural South Carolina" examine the levels of dental health cognition and components related to adequate dental health knowledge in a group of black adolescents living in rural areas. The study used a convenience sample of 151 black adolescence aged 10- 18 years dwelling in rural South Carolina. Questionnaires composed of 33 questions were used to cover the following areas:

> Causes of periodontal disease, physical signs of periodontal disease, consequences of periodontal disease, ways to prevent periodontal disease, definition of plaque , plaque removal , definition of dental caries, causes of dental caries, ways to prevent dental caries, definition of dental sealant, recognition of the anti caries preventive action of fluoride, sources of fluoride, amount of sugar in a can of soda, recognition of sweet consumption behavior that is less harmful to teeth, and identification of common snacks and drinks (p.15).

In this study, the mean percent correct on the dental health knowledge questions were 55.0% using 75% as the limit for satisfactory dental knowledge, only 7.9% of the participants accomplished this level. Two thirds of the younger adolescents were beneath the median on dental health knowledge. Yuen et al., (2008) study outcomes showed severe insufficiency in dental health knowledge among this group of black adolescents particularly those in the junior group age (10-12) years. The dental knowledge of this age group was limited to basic oral hygiene activities (brushing and flossing) to maintain proper dental health. Words such as dental sealant, fluoride and plaque were unacquainted to them. Participants supplied imprecise information on the purpose of fluoride and cariogenic status of ordinary snack food and drinks and were baffled that junk foods are dangerous to teeth. Most of the participants in this study comprehended that fruits and vegetables are good for their health but also thought that this applied to dry fruits not identifying that dried fruits are possibly much more cariogenic than fresh fruits. Some participants did not recognized and know the proper action to take in the event of early signs of periodontal disease. In this study like in the study by Weiener, Crout and Wiener (2009), and Amin and Al-Abad, (2008), it is found that school age children and adolescents have a limited knowledge on proper dental health.

Deficient dental health knowledge among children and adolescents has been connected with a higher prevalence of untreated dental caries. Children and adolescents with inadequate dental health knowledge were found to be twice as likely to have caries as those with adequate knowledge. Additional factors that continually contributes as barriers to poor dental health includes financial constraints which contributes to low income families limited access to providers and limited utilization of dental care (Yuen et al., 2008).

As iterated in the study by Alves de Farias, Costa de Araujo and Ferreira, (2009), to find out the effect of an oral health education program on oral hygiene and the awareness level on elementary school children third and fourth grades ages 7-15. A blind random control intervention method was utilized where 247 Brazilian (Parnamirim) school children were randomly assigned to a control (115) and experimental group (132). Socio demographic information were transcribed and a clinical investigation was given to establish the decayed, missing and filled surfaces index (DMFS). The Visible Plaque Index (VPI) is a plaque index capable of only telling areas on the teeth that the patient has unsuccessfully cleaned effectively and the Gingival Bleeding Index (GBI) used for gingival disease assessment were gathered before and after the intervention.

The researcher applied a closed-question questionnaire to the school children before and after intervention to ascertain the knowledge of oral health. The outcome demonstrated that the VPI and GBI of the experimental group were significantly lower post the educational activities (Plaque and gingival bleeding). The experimental group also acquired an increased number of correct answers on the questionnaire. The control group were ten times more likely to answer the questions wrongly. Nevertheless there was no relationship between oral health indexes (VPI and GBI) and the information level of the schoolchildren. According to the researcher, "It is showed that contextualized educational activities in the school routine had positive effect on oral hygiene and the level of information about oral health , although the more informed individuals did not always practice better oral health" (Alves de Farias, Costa de Araujo and Ferreira, 2009, p. 225).

The World Health Organization (WHO) recognizes that there is an increase in the prevalence of oral health diseases. WHO is combating this problem by reorganizing many of their global oral health policies and current programs at hand towards oral health promotion and oral disease prevention. The WHO is working closely with the Department of Chronic Diseases and Health Promotion Programs. These programs help to build oral health policies which would work towards effectively controlling the risks to oral health, based on the common oral risk factor approach. The focus is on modifiable risks behaviors related to diet, nutrition, and use of tobacco, excessive alcohol consumption and hygiene.

WHO is working with developed and especially upcoming developing countries by targeting there water supplies by making sure it is fluorinated. The Program assists countries and regions in their endeavors securing healthy environs with access to safe water and sanitation, and it is a precedence issue to promote national health authorities to employ impelling fluoride programs for prevention of dental caries. The program's goal include automatic fluoride administration (water or salt fluoridation) and using affordable fluoridated toothpastes. Self-care practices in relation to oral hygiene are necessary in the promotion of oral health and the Oral Health Program works for conceptualization of national and community policies on effective control of "diet and nutrition risk factors for dental diseases, oral cancer, and cranio-facial development diseases"(WHO, 2014, para. 5). The program will be implemented by the WHO Global Strategy on Diet, Physical Activity and Health. The WHO Oral Health Program is also concentrating on tobacco use (smoking and smokeless tobacco) being risk factor to conditions such as oral cancer, oral mucosal lesions and periodontal disease (WHO, 2014).

Current and Pertinent Educational Information on Dental Care

Dental hygienists and dentists would have the possibility to render instructions to parents and caregivers when the child is just about six months old when the first tooth eruptions. At this time, the parents are excited and open to keeping the child caries-free. In addition, caries risk assessment, nutritional counseling, oral hygiene instructions and primary assessment could happen to any child who is prone to have an increased caries risk could acquire the needed care to limit the child's caries load. Dental hygienist or dentist would also have the chance to interact with the child in a warm, hospitable environment, relieving some of the concerns and negativeness often encompassing dental care (Wiener, Crout and Wiener, 2009).

The dentist should furnish teaching to the parents and guardians about brushing twice daily and dental flossing the child's teeth daily, kinds and quantity of toothpaste to be used, the effects of refined sugar influence, and different oral hygiene aids that are available. Many parents are unaware of the sugary content and acid in drinks, especially fruit juices. Therefore, their child may consume sodas and sugary drinks in place for milk and water. In addition, children who sips their drinks over a lengthy period of time, are continually vulnerable to the pH of the teeth's biofilm in the demineralization range and places the child at peril for caries. All the above mentioned issues can be address by implementing early preventive educational measures (Wiener, Crout and Wiener, 2009).

The use of fluoride should be discussed. It is crucial that the dental hygienist and dentist know the amount of fluoride their pediatric patient are exposed to. The primary element of the enamel is Hydroxyapatite. During amelogenesis (formation of enamel on teeth) up take of low levels of fluoride food, water and supplements can replace the hydroxyl group in some of the hydroxyapatite crystals. The resultant enamel has sites of fluorapatite or fluoridated hydroxyapatite, which makes the child's enamel more tolerant to dietary acids. Enamel in new teeth is also porous to the minerals in saliva. It is also found that enamel exposed to fluoride possesses a greater acid-resistant surface of hydroxyapatite and fluoridated hydroxyapatite. The utilization of fluoride toothpastes and mouth washes are expected to defend the outermost surface of enamel from acidic exposure in fully erupted teeth (Wiener, Crout and Wiener, 2009)

When children eats foods full of dietary sucrose or acid, and the plaque pH drops to a dangerous rate of about 5.5, the evenness of demineralization/remineralization is removed toward demineralization of teeth. Other studies highlighted the impact of fluoride in remineralization and caries lessening while other have not. According to (Wiener, Crout and Wiener, 2009) fluoride levels in the concentrations between 0.03 and 0.08 parts per million in a tooth's biofilm, the fluoride rises the improvement of hydroxyapatite and fluoridated hydroxyapatite.

The correct quantity of toothpaste use is significant to the complete fluoride exposure of a child, and parents or guardians must be thoughtful of the general fluoride exposures their children have. Oral and dental assessments have showed providing preventive care to parents when their child's first tooth erupts, plus the suitable volume of toothpaste to use described as a "pea- sized" amount or "smear" of tooth- paste weighing 0.25g.13 is essential ((Wiener, Crout and Wiener, 2009, p. 142).Restricting the quantity of tooth-paste is significant when a child is too young to spits out, and instead gulps the toothpaste, particularly with fluoridated toothpaste. Fluorosis of the maxillary central incisors is a consequence for children 15- 24 months old with excessive exposure fluoride. Flavorings added to tooth- pastes may encourage swallowing of the toothpaste. Parents must be educated about the risk of further fluoride exposure if young children are utilizing and swallowing fluoride toothpaste.

Current oral hygiene teaching programs should not only address toothpaste use, brushing, flossing, and nutrition, but also primary protective care, which many children do not have. Children from families of inferior socioeconomic position are described to have more oral health complications, some of which are linked to gaining access to care, than children from households of higher socioeconomic status. Almost 66% of children nationally obtain 1 yearly preventive dental visit - the very young often do not receive any dental care. There are numerous reasons for children not getting dental care: lack of awareness by the parent or guardian, distance to a dental office, shortage of transportation, and in- capability to pay for care. Deprived of the opportunity to receive guidelines, some parents may not acquire of ways to improve their child's oral health and welfare. Outreach educational programs are introduced to assist, link the breach, and make available convenient settings for educational opportunities, and inspire follow-up dental visits. These programs are becoming increasingly important to meet people's needs with superiority data about preventive care.

Ensuring that children are healthy and able to learn is an essential part of an effective education system. As many of the above studies have shown, education and health are inseparable. Educating for health is an important component of any education and public health program. A physical, nutritional and oral health educational program geared towards children of school age and adolescents with an expected change in overall behavior will in some ways be influential to protect young people against threats both behavioral and environmental, complements and supports policy, services, with the goal of having an overall healthy individual. The impact of the educational program in an afterschool setting re- addresses the hypotheses that when children have pain they cannot eat, when children cannot eat, they are hungry, when children are hungry, they cannot concentrate and learn and function at their highest potential. Therefore there is an interconnectedness between the physical nutritional and oral health care of children which children, parents society and the policies maker must thrive to keep whole.

Strengths and Weaknesses

The strengths and weaknesses of the project are as follows: the purpose is written in a declarative form, meaning the intention of the study is clearly stated. It showcases the relationship between the variables, that is, the independent variable, which is the program and the dependent variable, the students' knowledge. This topic deals with a current issue that has been globally recognized. The research project will add to existing knowledge about the concerns of cariogenic food consumption and its effect on oral hygiene.

The research by Amin and Al-Abad (2008) concluded that, "poor oral hygiene practices, lack of parental guidance and appropriate dental knowledge with frequent exposure to cariogenic food in addition to socio-demographics are the main risk factors for dental decay among the surveyed students" (p. 361). In this project, only the students were participants. If parents were part of the questionnaire, there will be room for meaningful re-enforcement by the parents at home, thus enhancing knowledge level.

The researcher is using reliable instruments, "The Oral Health Questionnaire and the School Physical Activity and Nutrition Questionnaire," to gather data. The researcher has permission to conduct the research at an approved after-school setting. This research is expected to go through a state institution IRB review process. Our critique of the research design is limited at this point since the research study has not been completed. However, the researcher proposed using the pre and post-test experimental design.

The researcher has clearly described the method to be used in executing the research. The proposed research participants will be randomly selected and placed into two equal groups. The control group will not participate in the Physical/ Nutrition/ Oral Health Education Program and an intervention group will participate in the Physical/ Nutrition /Oral Health Education Program. The intervention group will complete a questionnaire about nutrition, oral health and physical activity. This group will receive the Physical/ Nutrition /Oral Health Education Program after school with the principal investigator (PI)/researcher. The lessons will take place at an approved after-school setting. The lessons will consist of 6 lessons taught by the PI for 6 weeks. The lessons will be conducted twice a week with each lesson being taught for approximately 60 minutes, and hands-on activities will also be used. The hands-on activities will involve food preparations that allow the intervention group to observe and prepare the proper food portions, such as main dishes, side dishes and desserts and proper mouth care, which is composed of proper oral cleaning, brushing of teeth, flossing and gargling.

Enablers and Barriers

Possible threats to this study include: the extent of imprecision by research participants in their answers to the study questionnaire cannot be controlled. The study assumes that the questionnaire will be completed honestly and to the best of the participants' knowledge. Precise dietary estimation is difficult in any age group but, particularly in children (Sahota et al., 2001). Few validated instruments are available, and the SPAN Questionnaire in this research study cannot evaluate quantities and serving sizes precisely, therefore the researcher will depend more on the quality of food reported in the SPAN Questionnaire. An Oral Health Questionnaire will be used to gather data about the oral health aspect of the study.

Potential exposure of the subjects to different media prior to or during the study can influence some of their responses. The researcher does not have control over such influences, namely mass media, television, computer games, and the Internet (French, Story, & Jeffery, 2001). Parents and other family members influence food choices, preferences, and behaviors by modeling behaviors and showing children that they enjoy certain foods (Cullen et al., 2001; Neumark-Sztainer, Story, Perry, & Casey, 1999). Research revealed that there is significant family influence on eating behavior and food choice in terms of fat, calorie, and nutrient intake. These studies indicated that parents' eating behaviors and their children's feeding practices influence children's eating behaviors and explain the family resemblance in many overweight conditions (Birch & Davison, 2001; Birch & Fisher, 1998).

The researcher will have no control over the types of students who will be placed in the intervention group due to the fact that the students will be randomly placed into two equal groups. Parental consent will be needed before the students can become part of the study. As with many other intervention programs implemented in schools, a lack of active parental involvement and influences could be a weakness. Because of the limitations described above, the results of this study cannot be generalized to any other public school settings. The results will be specific to the students who will participate in the study. Internal validity refers to the ability of the researcher to make conclusions regarding the effectiveness of an intervention. External validity refers to the ability of the researcher to generalize the results of the study from the sample recruited across populations and to different populations. The external validity of a study depends on the sample of subjects and the methods used in the sample school assembly to ensure that a study sample is representative of some larger population to which the findings will be considered relevant. Children have a short attention span and limited recall period. Children may not be able to recall correctly using the SPAN and Oral Health Questionnaires. Therefore, the presence of the parents or guardians would secure more reliable information on what these instruments are intended to measure.

According to the U.S. Department of Health and Human Services' CDCP (2010), parents can make a difference in their children's physical activity if they support their children's participation in physical activity by being physically active role models. Parents can set an example by involving physical activities in family events and vacations, such as skating, parties and swimming trips. For children who are adventurous, hiking and biking are perfect ways to incorporate physical activity. According to Pender's Health Promotion Model, "Families, peers, and health care providers are important sources of interpersonal influence that can increase or decrease commitment to and engagement in health-promoting behavior" (Nursing Theories, 2012, para. 4). If parents make it a habit to implement physical activities into their lives on a daily basis, then, these habits are more likely to pass on to their children.

Conducting physical activity on a daily basis can contribute to weight control, reduce and protect against heart diseases, diabetes, and other chronic illnesses.

Physical education class is one important place where students could be learning the knowledge and skills to be active physically. However, physical education is not as available to students as fully as it should be (U.S. Department of Health and Human Services, 2002).

The students also fill in a sample plate diagram with actual food and portion sizes that they would eat during breakfast, lunch, dinner, and a snack. The students will be able to observe how the food was prepared from the shopping list and how it fit into their plate recognition forms. Also, students will learn about what keeps their bodies healthy. In addition, they will learn about prevention of cavities and proper oral health care.

The control group will continue with the normal physical education and health/science classes taught in the school and also complete questionnaires about nutrition, oral health and physical activity. Two instruments will be used to gather pre and post-data, the School Physical Activity and Nutrition Questionnaire and Oral Health Questionnaire.

Once the students and parents have consented and the pretest has been completed, the intervention will be applied. The dependent variables will be eating and exercise behaviors as measured by the pre and post-questionnaire given before and after the intervention. The independent variable will be the implementation of the intervention program. The proposed intervention program will take 3 months or one semester to implement. The program will be initiated at the beginning of the school year. There will only be one pre and post-test. The nutrition education/ physical fitness information will only be collected from the pre and post -test. As mentioned above, there will be only one pre and post-test to be given. A sequential test will be more appropriate to gather data about the progression of the interventions than utilizing only one pre and post-test. A barrier to this would be financial burden on the side of the researcher.

Discussion of Outcome

Hopefully, this program will contribute to students' attentiveness of proper eating habits, proper oral health care, and the benefits of regular daily exercise. Participants will be able to recognize, shop and prepare healthy foods that would keep their body healthy, in addition to learning about prevention of cavities and proper oral health care.

One implication the researchers believe of these findings is that nutrition and physical fitness intervention programs in schools can be effective. An interactive health curriculum such as the Expanded Food and Nutrition Education Program (EFNEP) from *My Pyramid Food Guide* and *Dietary Guidelines for Americans* can allow for many hands-on, lifelike experiences similar to the types of activities proposed in this study. For example, students who participate in this purposed study will have to develop a meal plan for the week and a shopping list based on what they learn about plate recognition and the recommended amount of daily food intake. In addition, they will have to demonstrate proper oral health care, such as brushing, flossing, etc. By implementing hands-on activities in this program, students' learning experience will enhance their ability to think critically. The students will be able to plan a process, put the process into motion using various hands-on materials, see the process through to completion, and will be able to explain and show their results.

The need for further research on programs designed to improve the proper oral health habits, dietary habits of children and adolescents is of high importance. It is expected that this study's findings will illustrate the need to continue to work toward a better oral health care, healthy food choice environment at school, at home, and in the community in order to support an achievable change in behavior. Perhaps there will be more of a difference in children's physical activity if the community, parents, and guardians become more involved.

Evaluation of Overall Contribution

The literature review has contributed to this project by showcasing the vitality and awareness to this global problem. Like the United States of America, other countries are combating this issue at hand by providing free dental care services for their children, however, it is shown that there is an increase in the prevalence in dental caries. That is why it is of great importance to develop and implement programs that will continuously assess children's knowledge of proper oral health care and reinforce learning.

The researchers believes that there might not be an effect on students' physical activity due to the lack of student interest. Most students nowadays prefer to play video and electronic games rather than partaking in football and basketball activities. Therefore, by implementing a physical activity that grasps school-aged children's' attention will ideally motivate children to engage more frequently in physical activity.

For example, choosing physical activities such as football or basketball drills that will allow the students to move around by making them run, laugh, and have fun will, at the same time, get them in shape. In order to increase the students' physical activity experience, there must be some type of choice, more time to complete the activities, fun, and friends to complete the perfect physical activity program. Condon and Collier (2002) suggested that choice is believed to be significant for students to become and remain physically active. Choice encourages self-management, prepares for self-directed activity, and encourages exercise adherence.

There is an increased appreciation of the importance of early prevention to counteract nutrition-related diseases. In 2001, the Surgeon General called for a national public health response to childhood overweight and obesity epidemic and for the development of suitable prevention and health promotion strategies. These health promotion efforts should include children and adolescents from diverse backgrounds and should take into consideration home influences, school influences, community influences, and public policy, and should identify strategies to address individual behavioral changes (U.S. Department of Health and Human Services, 2002). Early prevention is the key to promote or stop any behavior. Development in health education and physical activity intervention programs are needed to provide more effective monitoring of behavior to reduce the prevalence of obesity in early childhood.

If parents are made aware of dental health, and the importance of brushing and flossing appropriately, implementing counseling at an early onset of age, then the incidence of dental caries can be minimized, thus reducing the need for costly dental procedures and treatment.

The implementation of the proposed study "The Physical/ Nutrition/ Oral Health Education Program" will lead to healthier and more productive individuals in the society and community at large. This also will reduced the financial burden on health care.

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