MEASURING THE IMPACT OF CONSUMPTION OF APPLE AND BENGKUANG FRUIT ON DENTAL PLAQUE REDUCTION IN SCHOOLING CHILDREN

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Abstract

The main aim of this essay is to focus on dental plaque in school going children and the possibility of using apple and Beng Kuang fruits for its reduction. The disease is the most predominant type of the dental bracket because it develops naturally, mainly because of the bacteria found naturally in the mouth. The threshold of this disease is cavities which may mean pain and discomfort. Within the realm of school going children, adverse effects of this disease can affect the overall esteem and subsequently the performance which may translate to failure in life. To worsen an already bad situation is the state of dental care in many countries and especially in the United States. The dental care sector is the most wanting of the health care and therefore inefficiency in dental programs.

Some studies have indicated that the apple and bengkuang fruits can be used in the reduction of plaque. The apple is basically found throughout the globe while the bengkuang fruit indigenous to Indonesia. Putting all the variables in order should determine if this is true.

Introduction

The effects of dental diseases in schooling children cannot simply be disregarded because of the ripple effect on their education and subsequent life. These diseases affect a child in the social, cultural and environmental contexts and therefore need to be taken on a serious note. One notorious dental disease among children is the dental plaque. It is basically a soft deposit of biofilms, made up of streptococcus and other bacteria, firmly attached to the surface of the tooth or any other hard surface in the oral cavity. The disease can develop on the teeth just above the gum line (supragingival), it can also develop below the gum line on the roots (subgingival) or along the gum (gingival) (Dimatteo, n.d.). Considering that plaque is naturally formed, a build-up is what is describes as to be the main cause of the disease.

Some of the effects of dental plaque include pain, difficulty in speaking, poor appearance and teeth loss which simply translates to educational difficulties. It has been described as the most common dental disease with an approximation of being 5 times more common than asthma (Szalay, 2014). Furthermore, children in the United States have a 50% chance of having dental caries in their primary teeth by the first grade. More to this is the fact that more than 80% of the adolescents have this disease by the age of 17 (Maas, 2002).

Considering that there is a disparity in the access to health care services particularly in the dental sector, some of these children might not be able to access treatment and check-up services. These children are particularly from the minority groups such as African Americans and Hispanics or generally come from poor backgrounds. As a matter of fact, dental care is one of the most unmet health care services around the world (Sharma, Bansal, & Sharma, 2014)Simply translated, other ways should be investigated on how to tame dental plaque. A simple way to prevent this disease is through proper care such as: brushing at least twice a day,

flossing daily, limitation of sugary foods and regular check-ups which might be ineffective to school going children (Friedman, 2017).That stated, the main aim of this essay is to try to measure the impact of consumption of apple and Beng Kuang fruit on dental plaque reduction in schooling children

The Apple and Beng Kuang Fruits

The apple is the most popular fruit. It has always been stated that ‘an apple a day keeps the doctor away’ but there are contradicting reports about the health benefits associated with apple. Some indicate negativity while others have described the positive results.

The apple has been described as a universal medicine due to the various health benefits associated with it. The British National Health Service has indicated that the fruits are very rich in fiber and can help prevent various types diseases but On the downside, the fruit has high contents of sugar and acids which can be harmful (Nordqvist, 2017).

The bengkuang fruit is a tropical fruit of Indonesia It is a crunchy vegetable that may be sweet or sour in flavor but one of its main characteristics is its richness in water (Sidharta, 2000). Furthermore, the bengkuang fruit is rich in dietary fiber and a range of minerals basically meaning it has various associated health benefits.

Methodology

Apple

Three groups of children are formed. One group had apples integrated into the normal diet, another group had an exclusive diet of apples and the last did not have any apple implemented into their diet.

Bengkuang Fruit

The Beng Kuang fruit can be used in either the mechanical or chemical aspect (Wahyuni & Herawati, 2013). The mechanical aspect of treatment involves chewing the fruit while the chemical perspective involves gurgling the juice from the fruit. In the determination of the effectiveness of the Beng Kuang fruit, 2 groups were formed, composed of 15 adolescents each; 16-18 years. The first week involved the first group chewing the fruit while the other group drank the juice. The second week involved shifts with group 1 doing what group 2 was doing the first week and vice versa

Results and Discussion

Apple

To begin with, by introducing an apple into the diet of children within the school going bracket, the overall dental hygiene is catered for. The apple can be regarded as a natural toothbrush mainly due to the fact that it is rich in fiber.These fibers can brush the teeth, tongue, gum, and mouth in a toothbrush fashion removing some of the sugar remains and the food particles that can lead to dental carries. Furthermore, the skin of the apple is enriched in fiber

meaning that it can act as a form of brush too, scrubbing the teeth and subsequently removing any traces of plaque in the teeth. This, in effect, reduces the chances of bad breath in children

More to this is the fact that apples have been known to be good to bone health and hence are more likely to improve the health of the teeth. The antioxidant and anti-inflammatory properties of the apple, to add to the fact that they are rich in calcium, improve the density and health of teeth (Jennings, 2016).

On a downside, it has been established that giving the children an exclusive diet of apple tends to cause harm. This is because apples are acidic and it is known that acidity is the reason behind dental plaque. Furthermore, the sugar content in apples is very high and can lead to dental diseases. Apples are fairly acidic and hence they are about 4 times more damaging to the teeth than carbonated drinks (Nordqvist, 2017).

On another note, regardless of the acidity of the apple, snacking on them daily may be more damaging than eating them at meal times (Nordqvist, 2017). Comparing the effects and benefits of apples, ensuring that school going children have some specified amount of apple in their diet is much more likely to outweigh the effects.

Bengkuang Fruit

The group that was involved in chewing the Beng Kuang fruit within the first week showed a significant reduction in dental plaque as compared to the other group. Studies have indicated that chewing the fruit is much more effective than gurgling the juice. These fruits have a pulp described as being thick, rough and also substantially hard. Adding these characteristics to the availability of fiber in the fruit makes them have a brush like effect that is the foundation of

the toothbrush. Furthermore, it has been described that chewing of these fruits is a mechanical way of stimulating the teeth to erode the plaque deposits in a natural way (Sidharta, 2000).

Recommendation

Dental plaque is one of the most common dental diseases in school going children and can impact negatively on their educational performance. There are two ways that should be emphasized for the reduction of this disease in children: either by oral care or the use of the apple and Beng Kuang fruits for treatment. Personal health care should be the first consideration as prevention is always better than cure: Brushing teeth after every meal using soft bristled toothbrushes to ensure that there is no build-up of plaque, cleaning in between the teeth by flossing or any other possible method to flush out plaque from the places of hiding, visiting the dentist more often for check-ups which will ensure no plaque, doing away with diets involving starch and sugar and washing the mouth with mouthwash (Ellis, 2016).

On another note, considering that the dental care sector is one of the most unmet health care systems, introducing children to diets of apples and the Beng Kuang fruit will be a leap forward to the reduction of the disease. These fruits offer a cheap option for the reduction of dental diseases but the Beng Kuang fruit might be preferable considering that there are no adverse effects as in comparison to the apple

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