

Cross-Sectional Survey Of Nutritional Counseling Practices And Attitudes Towards Dairy

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LEARNING OBJECTIVES

Upon review of this material, the observer will be able to...

1. Assess the utilization of nutritional services by pediatric dentists in private practice
2. Document which nutritional guidelines pediatric dentists use for their nutritional recommendations
3. Examine current attitudes towards sugar-sweetened dairy products and their role in cariogenicity

INTRODUCTION

Nutritional counseling is an important tenet of care for pediatric health providers. Likewise, pediatric dentists play a key role in providing parents with anticipatory guidance and preventative guidelines to prevent dental caries. A large contributor to dental caries are added-sugar beverages¹. Interestingly, milk is not considered an added-sugar beverage by the United States Department of Agriculture (USDA) nor the American Academy of Pediatric Dentistry (AAPD) even though it is one of the top contributors of added-sugar beverages in children ages 2-11 years old^{2,3}. With this in mind, this study seeks to explore current nutritional counseling trends and attitudes towards milk beverages by pediatric dentists.

Health professionals, including pediatric dentists, are trusted by American patients to be the most trustworthy source of nutritional information⁴. Pediatric dentists also make dietary recommendations to parents as part of their comprehensive treatment plans. A study from 2005 found that pediatric dentists see more patients on a daily basis than pediatricians; this creates many opportunities for pediatric dentists to engage in nutritional counseling with patients.

Currently, the dietary guidelines set forth by the USDA recommends children receive 2-3 cups of dairy milk per day, regardless of sugar content³. Plain dairy milk contains 5% sucrose and was found to have a more erosive effect on teeth when compared to distilled water in a study done by Bowen⁵. When compared to water, plain dairy milk did not have a statistically significant cariogenic effect; the casein protein in plain dairy milk was likely protective against dental caries. However, this study did not explore the effects of flavored milk on dentition.



Teeth from a control rat given distilled water⁵.

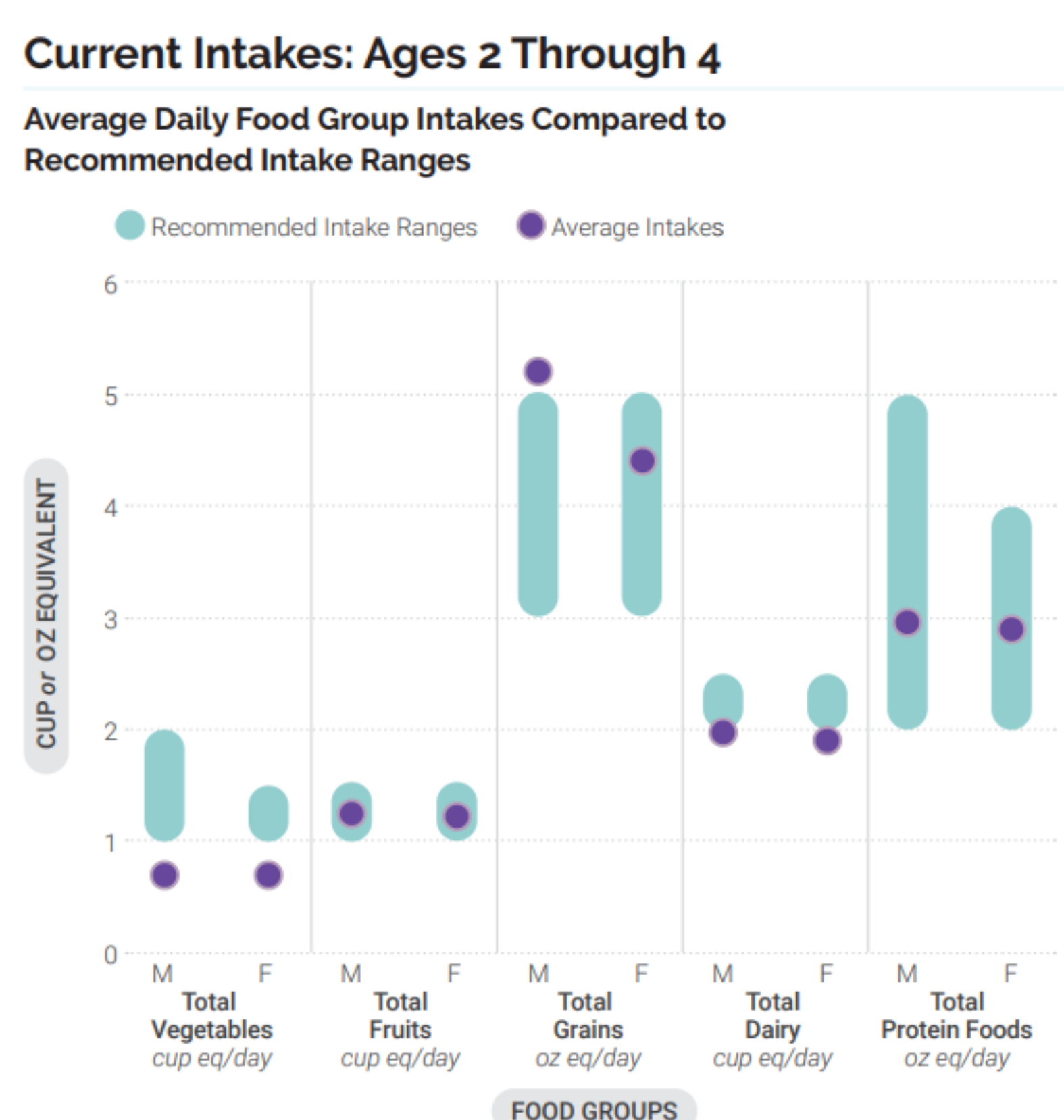


Teeth from a rat that was fed white bovine milk⁵.

Frequent flavored milk consumption has been found to be associated with dental caries. This is not surprising considering that chocolate milk has been found to have as much as 13 teaspoons of added-sugar per serving. Since the American Heart Association (AHA) only recommends 3 to 4 teaspoons of added sugar per day for children, future studies are needed to re-evaluate the classification of flavored milks in childhood nutrition.

Beyond the issue of added sugar in milks, it is important to review the level of nutrients milks are providing to small children. While dairy milk is increasing the added sugar in the diet, it may not be increasing the amount of fat-soluble vitamins to the extent that manufacturers declare. Milk starts to lose its nutritional value and flavor quality after just 2 hours of light exposure when packaged in clear high-density polyethylene (HDPE) containers.

In a study looking at ways to improve childhood nutrition in developing countries, a randomized controlled trial was conducted to examine the effects of drinking sugar-sweetened beverages compared to milk. The study found that none of the children drinking dairy milk were meeting the calcium requirements set by the USDA. What's more, the NHANES survey from 2015-2016 found that American children aged 2 to 4 years are not meeting daily vegetable requirements. Consequently, this study seeks to highlight the nutritional requirements of pediatric patients in addition to providing updated data on dietary counseling by pediatric dentists in the United States.



According to data from the NHANES study 2015-2016, children aged 2 through 4 years are not meeting USDA recommendations for daily intake of vegetables, nor dairy³.

PROPOSED METHODS

An email was sent to private practice members of the AAPD to take an online survey. The survey data was collected via Qualtrics. The questions were multiple choice and checkboxes that asked pediatric dentists about their nutritional counseling practices and attitudes towards milk beverages. No follow-up questions were asked and no personal information was gathered.

Questionnaire Examples

What guideline do you refer to for your nutritional counseling with parents?

Do you counsel parents on the amount of dairy products given to their children?

How effective do you feel nutritional counseling is in reducing dental caries in your patients?

PURPOSE

The study objective is to document current nutritional counseling practices by pediatric dentists in the United States. Beyond this, the study will also assess which resources are used to make dietary recommendations and it will highlight the role of dairy in the diets of patients and providers.

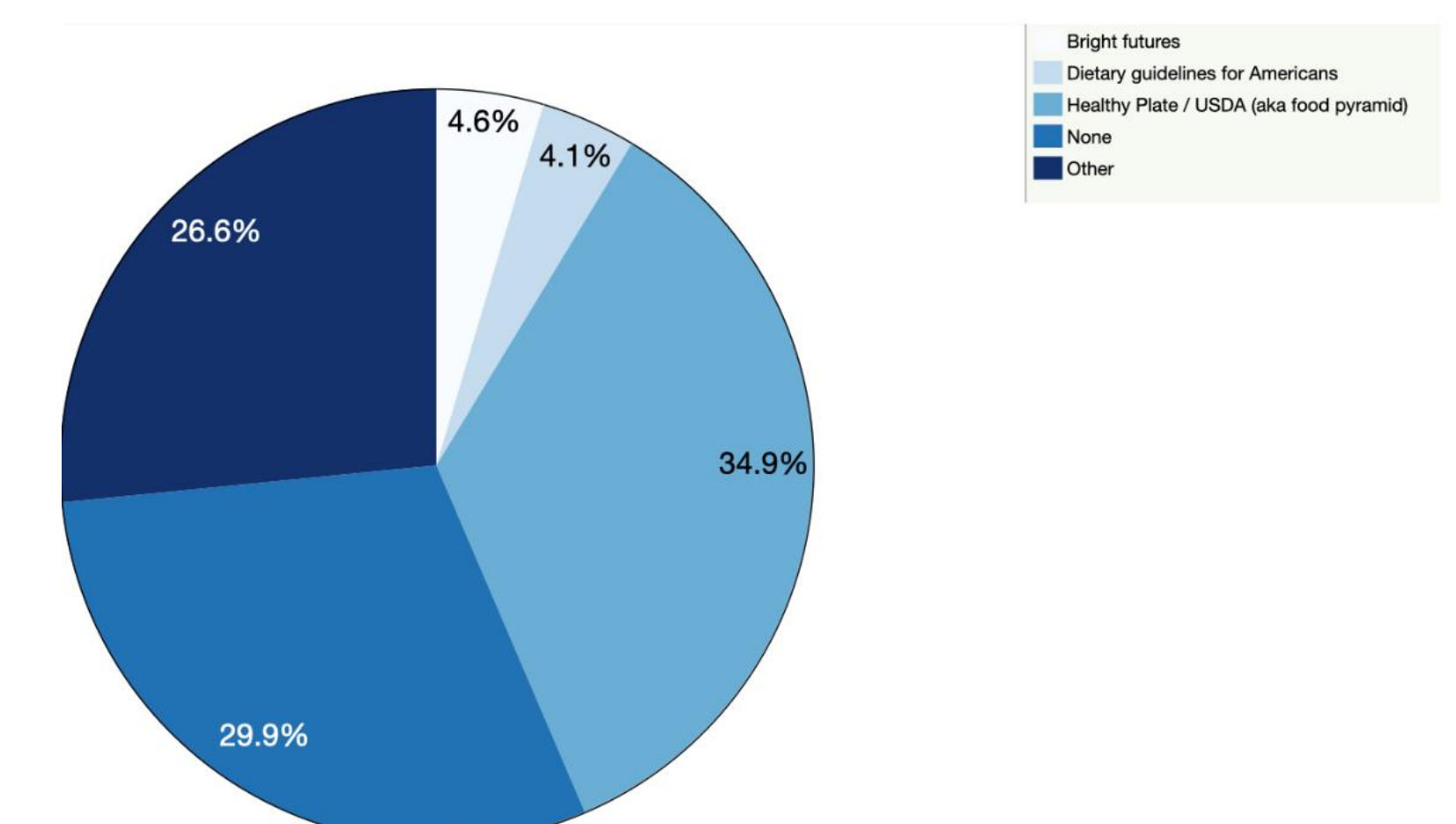
RESEARCH HYPOTHESES

Hypotheses for this study include:

1. Pediatric dentists receive their nutritional guidance from an assortment of guidelines, resulting in unstandardized nutritional recommendations to parents.
2. Most pediatric dentists will consider flavored milk to be a sugar-sweetened beverage.

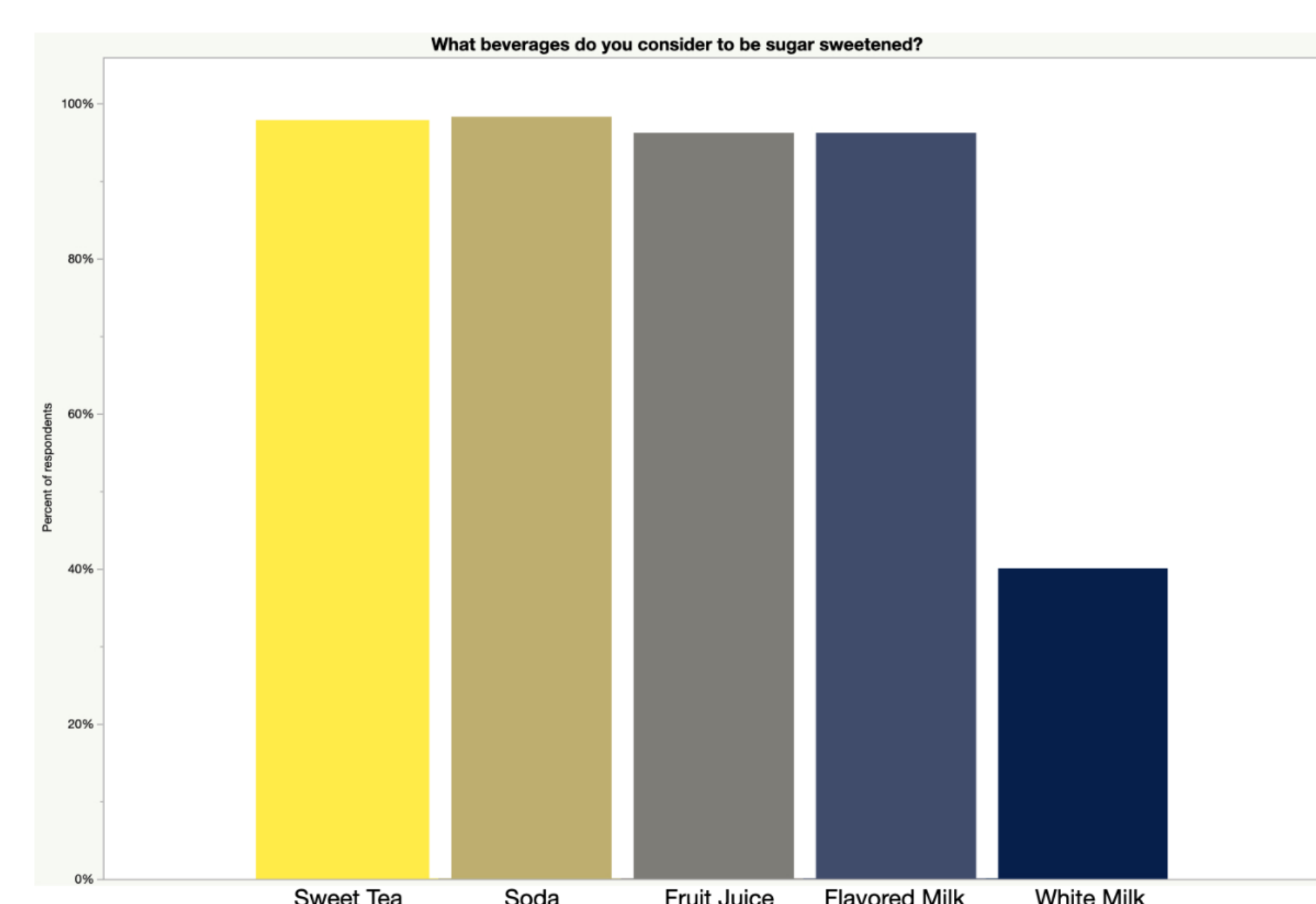
RESULTS

Table 1: Nutritional Guidelines PDs Refer to for their Nutritional Recommendations



Among the variety of publicly available nutritional guidelines, there was not a centrally agreed upon resource that pediatric dentists use. The most popular choice was the "Healthy Plate" published by the USDA, with almost 35% of respondents claiming to use it. Considering that both the Dietary Guidelines for Americans and Healthy Plate are published by the USDA, pediatric dentists refer to a USDA-authored material for help 64.8% of the time.

Table 2: Beverages Considered Sugar-Sweetened Beverages by Pediatric Dentists



One survey question assessed attitudes towards sugar-sweetened beverages (SSBs). Soda was the most popular answer choice with 98.3% of respondents agreeing that soda is an SSB. Ninety-seven percent agreed that sweet tea is an SSB. Fruit juice was also a top choice for an SSB at 96.3%. Most interestingly, flavored dairy milk was considered to be an SSB by 96.3% of pediatric dentists. Finally, 40.1% believe that white milk is an SSB.

CONCLUSIONS

(1) Pediatric dentists are continuing to provide nutritional counseling at a high frequency. (2) This study found that there is no universal resource for nutritional counseling. (3) A large majority of pediatric dentists believe that flavored milk is an SSB. Perhaps guidelines should be changed to reflect this. (4) Pediatric dentists have an area for growth in regards to recommending vitamin-rich foods, but this could be due to the fact that we don't have a centralized resource.