

Promoting Healthier Sugar Intake Habits

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Abstract: Sugar intake regulation is a huge public health problem in the United States, as excessive and insufficient consumption carries significant health risks. On the other hand, a lack of adequate sugar intake, often related to restrictive eating habits or health conditions such as diabetes, can lead to hypoglycemia, fatigue, dizziness, and many other adverse effects. While knowledge is growing about the health consequences associated with excessive sugar consumption, many Americans still find it very difficult to achieve a healthy balance in their diets.

Keywords: Sugar consumption; Dietary behavior; Health education; Marketing influence; Nutrition awareness

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1. Introduction

Marketing plays a central role in influencing dietary choices, particularly through targeted campaigns that present sugary products as either appealing or deceptively healthy. Sugar-sweetened beverages make up nearly half of the added sugar consumed by people in the United States, making them a leading contributor to excessive sugar intake. To compound this problem, processed food products with hidden sugars further exacerbate this, making it difficult for consumers to make healthy choices. Moreover, socioeconomic disparities play a critical role in dictating eating habits, as it makes excessive sugar intake more probable in younger age groups, economically disadvantaged families, and individuals from certain geographical regions. Another factor is psychological: ignorance about nutrition and social influences, which exacerbates the trend because most people would rather opt for taste, convenience, or price over health.

To address these challenges, this study proposes a multi-pronged approach that targets the root causes of excessive and insufficient sugar consumption. Personalized nutrition education is essential to ensuring people gain the necessary knowledge to make informed diet choices. A tailored online forum, together with community workshops, would provide access to information and tools to guide consumers toward better behavioral practices, focusing on the risks emanating from high and low sugar consumption levels. Applying simpler food labeling, such as color coding, would make it easier to identify products that conform to their dietary needs. To further encourage

healthier choices, behavioral cues such as “Smart Sugar Choices” tags at retail stores and restaurants can nudge people toward better choices. Leveraging technology, a customized app could help people track their sugar intake, plan meals, and receive personalized reminders to maintain balance. In addition, social media campaigns would help create awareness and institute the normalization of healthier habits through engaging content that highlights the importance of balanced sugar consumption.

2. Current situation

Managing healthy sugar intake has long been an important public health issue in the United States. A survey conducted in 2021 indicates that about 38.4 million Americans of all ages are reported to have diabetes, accounting for roughly 11.6 percent of the U.S. population ^[1]. Excessive or insufficient sugar intake both cause harm to human health. On the one hand, excess sugar consumption has been associated with increased obesity rates, type 2 diabetes, cardiovascular disease, and tooth decay. Conversely, consuming too little sugar, which is often caused by restrictive diets or underlying medical disorders such as diabetes, can result in hypoglycemia, lightheadedness, lethargy, and other negative health consequences.

In defining the sugars people consume, sugars such as sucrose, fructose, and glucose that are added during the food production or preparation process to enhance flavor are referred to as added sugars, while the naturally occurring sugars found in honey, fruit juices, and syrups are referred to as free sugars ^[2]. Since increasing evidence has associated free or added sugars with diabetes, heart disease, and dental decay, many organizations, including the World Health Organization (WHO) and the American Heart Association (AHA), have issued guidelines to promote healthy sugar consumption. However, research shows that the total sugar consumption in the United States has shown an upward trend in the past ten years, increasing from more than 10 million tons in 2009/2010 to more than 11 million tons in 2019/2020 ^[3]. Notably, excessive consumption of added sugars is widespread among American adults. The National Health and Nutrition Examination Survey (NHANES) 2017–2020 indicates that the average amount of added sugar consumed by US adults aged over 20 was 16.64 tsp, 19.28 tsp for men, and 14.19 tsp for women, substantially higher than the recommended amount of 9 tsp for men and 6 tsp for women by the American Heart Association ^[4–5]. Similarly, the survey shows that people’s average intake of added sugars as a percentage of calories was 12.7 percent, which equates to an average of 67.8 grams per day. However, according to the Dietary Guidelines for Americans 2020–2025, added sugars ought to constitute less than 10% of daily calories ^[6]. Therefore, despite the growing familiarity with the dangers of excessive added sugar, food containing added sugar is still very attractive to many people, and the behavior of excessive sugar consumption is still widespread.

3. Background analysis: The role of marketing in the problem

The heavy investment in marketing food high in sugar has had a profound impact on customers’ dietary choices. In digital life today, food advertisements and drinks high in sugar are so easily accessible to everyone. Children and teenagers are especially vulnerable to the influence of marketing. From posters on the street and snack shops to online ads and social media, “huge sums of money are spent to reach these groups because they influence family decisions on what to buy and because of their potential for brand loyalty” ^[7]. Starting from the children’s requests, food and beverages high in sugar enter the household and are eventually consumed by the family together, including the adults who buy those foods.

Even if they have no children, adults are also influenced by such advertisements. In a study about adults' exposure to unhealthy food and beverage marketing, researchers found that "television was the most prevalent location of marketing exposure...followed by digital marketing"^[8]. Similarly, just as children may ask their parents to buy sweets, adults who are highly exposed to unhealthy food and beverage marketing are likely to buy sweets for their children. Different age groups' food choices will influence each other, contributing to an unhealthy American population.

Some advertisements make the food appealing, while some intentionally make it look healthy. Sugary drinks are "the single largest source of calories and added sugar in the U.S. diet." Therefore, some businesses try to convince consumers that the drinks are calorie-free. In 2013, Coca-Cola initiated an anti-obesity advertisement that admitted the harm of sweetened soda and promoted its calorie-free beverages. However, it is still possible that the findings of the study a company refers to look favorable to its claim because it is funded by the company. Therefore, it may be misleading and lure customers to purchase such seemingly healthy drinks and still consume an unhealthy level of sugar unconsciously.

4. Primary research

This study utilized a survey to learn more about 52 participants and their sugar intake behaviors, challenges, and perceptions of sugar, which was the focus of the primary research and survey distribution that targeted friends and the Twitter community.

The scope of the project was a perfect match because the survey targeted the 25–45-year age group. The most common age group (25–35) accounted for 75% of participants, while those aged 25–30 (9.6%) and 31–35 (9.6%) formed smaller groups. 71.2% of respondents were male versus 26.9% female. By education, the large majority were well-educated, with 40.4% holding a master's degree and 34.6% a bachelor's. These demographics suggest that they are an informed audience who can consider health-related behaviors.

4.1. Sugar in food is a necessary source of energy

Participants rated their knowledge of health risks posed by high and low sugar consumption on a scale from 1 to 5. For high risks related to excessive sugar use, the mean score was 3.54 with a median of 4, suggesting moderate to high awareness. There was relatively low awareness of insufficient sugar risks (mean 2.63, median 2).

4.2. Sugar consumption behaviors

The frequency of sugary food or beverage consumption was categorized as follows: 19.2% eat sweet foods several times a day; 31.9% eat them a few days a week; 5% eat sugary foods infrequently.

Only 15.4% of people actively track their sugar consumption. 69.2% considered their diets to be "balanced" in sugar content, even though they appeared to be sticking to extremely simple carbohydrates, suggesting either they were unaware or things were going unseen.

4.3. Obstacles facing sugar reduction

The survey found several significant challenges: 55.8% stated that lack of motivation was a significant barrier; 48.1% said they had trouble finding low-sugar products; 26.9% said they were expensive or had high prices.

These results indicate both behavioral and structural barriers, emphasizing relevant domains for intervention.

4.4. External factors behind sugar consumption

Social and cultural factors driving sugar consumption: 65.4% said they were moderately to very influenced by advertising (mean: 3.64; median: 4); 42.3% said that social gatherings usually mean they eat more sugar.

These findings highlight the opportunities for targeted behavior change, which may be driven in part by a better understanding of the marketing and social environments that shape dietary decisions.

4.5. Proposed solutions

Participants offered practical strategies for managing sugar consumption: 73.1% requested clearer labeling on food packaging; 51.9% favored having access to more healthful food choices that cost less; 50% stressed the need for educational resources to inform about sugar levels and health consequences.

These responses map onto consumer requirements of transparency, affordability, and accessible knowledge, reinforcing the efficacy of targeted interventions.

The survey highlights important opportunities to influence consumer behavior regarding sugar consumption. An alarming lack of awareness surrounding the dangers of inadequate sugar intake further highlights the necessity for effective educational campaigns promoting sugar management. Several of the identified challenges, including the cost and access to low-sugar products, were grounded in structural barriers, underscoring the need for interventions at the level of the market itself and partnerships with food producers to make healthier options available and affordable.

Social and cultural factors contribute as well; 65.4% of respondents said advertising affects their decision-making, and many consume increased amounts of sugar during social events. These findings suggest opportunities for utilizing advertising and social dynamics to encourage behavior normalization of healthier consumption patterns.

To address the common challenges faced by event participants when consuming BBQ in the social setting and to address the needs of participants for clearer labeling, more affordable options, and education, consumers will be empowered to make informed choices, adopt healthier habits, and mitigate health risks related to imbalanced sugar intake. This method allows for long-term health gains.

5. Recommendations

To help people in the U.S. ages 25–45 reduce their sugar intake, the study has come up with some recommendations focused on education, small reminders, technology, and community involvement. These suggestions can make it easier for people to overcome common problems when trying to change their eating habits. The goal is to help people adjust a few simple habits that can reduce excess sugar intake while retaining a sense of well-being in their lives. It is easy to enjoy a healthy life by incorporating sugar control into daily life rather than seeing it as a burden.

The first idea is a software application that allows users to develop a customized nutrition plan. As a part of this program, the creators would explain to the users the consequences of over as well as under consumption of sugar and the nutrition that some extreme diets can provide to the body. First of all, they need to understand that eliminating sugar intake does not mean eliminating all carbohydrate intake but substituting mundane added sugar with required carbohydrates. To explain these ideas to the users of these programs, such websites and applications can incorporate catch phrases like “an excessive sugar intake can cause a person to age much faster.” This will allow people to visualize this program and, therefore, want to engage with it. For example, the study

designed software that people can use to customize the plan that works best for them. Through this plan, they can learn about the amount of sugar they are consuming each day, and the software will also remind them if they are consuming too much or too little.

A second idea is to use behavioral cues to encourage people to make healthier decisions, for example, by encouraging people to eat products that have less sugar. Low-sugar or naturally sweetened products may be carefully placed at grocery stores and restaurants to make it easier for people to pick such items. Labels such as “Smart Sugar Choices” can also assist the consumers to pick up healthy alternatives. There can also be wish or discounts in the purchase of healthier goods as an added desire for customers to better their selection.

Social media is also a great way to reach out to people. Such networks as Instagram, TikTok, or YouTube can be a way to go further and share new short recipes, encouraging stories and exciting challenges for people on how to reduce the amount of sugar they consume. These campaigns can also become more effective when done with health influencers. For instance, instead of reaching for sweets, one can decide to have fresh fruit, which is a much healthier way of satisfying a sugar craving. Such social media posts can show that even small changes in what people eat can have an impact on their lives. People have to be cautioned that the anti-sugar program is not designed to stress the recipient, but to give them this obviously useful idea and then educate them about what healthy ways suit them better in this respect.

Additionally, it would also be beneficial to self-management to consider what role technology could play with these changes. A special application could be developed that would allow consumers to control their intake of sugar, plan their meals, and receive messages tailored to them based on those eating habits. The introduction of features that enhance the user experience, such as badges and streaks, may maintain user interest and reduce burnout associated with the task. In addition, the study suggests paying attention to the way food products are labeled. The labels should indicate the grams of sugar present in a given product and indicate the percentage that this amount is relative to the recommended daily intake. This would provide clarity on what people consume and prevent false advertisement. With all these strategies combined, users can be supported to limit their sugar intake more effectively and sustainably. These ideas will not only assist in making healthier decisions on food but will also help reduce the chances of developing chronic diseases such as obesity and diabetes. This promotes self-efficacy through better tools, education, and community so that people can achieve eating and health goals.

6. Limitations

The method of distributing the questionnaire in lifestyle-related communities on Twitter itself involves several limitations that might question the validity and generalization of this study. The participants, by belonging to lifestyle-related communities, are thus already interested in health, wellness, or diet-related topics, leading to selection bias and a sample not representative of the broader 25–45 age group in the U.S. This approach also limits demographic representation, as it excludes people who are not active on Twitter or do not engage in such communities, potentially underrepresenting groups from lower socioeconomic backgrounds, rural areas, or those who are less digitally active. Moreover, while the survey targeted U.S.-based users, it does not ensure even geographical distribution, possibly missing regional dietary and socioeconomic variations.

Although these suggested remedies have shown some potential for reducing excessive sugar intake, some of their limitations might seriously impact the viability of the strategies. First, these strategies may not fit all socioeconomic and cultural backgrounds, especially those who struggle to access digital platforms, let alone those

with food insecurity. Second, much of the secondary data relies on NHANES and USDA reports, which may not accurately reflect recent changes in consumer behavior or subpopulations, and self-reported dietary data is prone to certain biases.

On the other side, significant economic barriers are to be found. For instance, programs involving subsidies for low-sugar products and meal kit company partnerships will necessitate large investments and find resistance among food industry partners. Moreover, behavioral change is complex: strong preferences for sweet tastes and aggressive marketing of foods may well work against education and labeling efforts. The proposed use of digital tools, such as personalized nutrition apps, is highly dependent on sustained user engagement and accessibility, which could exclude people with limited digital literacy or access to technology.

Regulatory challenges, such as introducing simplified labeling, must be implemented and accepted by food manufacturers, which may show some resistance. Lastly, although these recommendations can easily lead to temporary awareness and changes in behavior, their long-term feasibility and scalability are not assured. Hence, they require continuous adaptation, funding, and monitoring to ensure that real impact is created. Future research should fill these gaps to make the proposed interventions more inclusive and effective.

Disclosure statement

The author declares no conflict of interest.

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