



2021

SUGAR-SWEETENED BEVERAGES AND NON-COMMUNICABLE DISEASE SURVEY REPORT

EXECUTIVE SUMMARY

In February 2021, Lake Health and Wellbeing conducted а sugarsweetened beverage survey which aimed to obtain the public's opinion on topics related to sugar-sweetened (SSBs) beverages and noncommunicable diseases (NCDs). Specifically, we measured the public's opinion on the importance of the government addressing NCDs, how concerned individuals are about NCDs, the public's support for government policies to reduce SSB consumption, and we explored what SSBs the public consumes and how often they consume these.

The survey enabled us to collect baseline data on the public's views of the above-mentioned issues and determine their frequency of SSB consumption to help inform the direction of our media and advocacy campaign.

To collect the required data, we developed a short survey (Appendix 1) which was adapted from previous questionnaires utilised by the Global Health Advocacy Incubator's Food Policy Program. The public could complete the survey anonymously online or via a hard copy with assistance from trained enumerators. A total of 423 people completed the survey, and the data was analysed using Excel and Google Forms.

Our survey suggests that St Kitts and Nevis has a high rate of NCDs and that the public is very concerned about NCDs and strongly believes that the government has a role to play in improving the country's health. Therefore, action is needed on NCDs, the reducing public's consumption is just one of many approaches that can be explored to address these health issues as our data shows high levels of SSB consumption in our sample.

To reduce the public's consumption of SSBs requires behaviour change, and this can be achieved through the introduction of SSB policies by the government. These policies include evidence-based and globally endorsed polices such as an SSB tax, restricting the sale of SSBs in and around schools and banning the marketing of SSBs to children. Our data suggests that there is some public support for these policies and further public support could be obtained if carefully designed education campaigns implemented. Although the survey data shows that the public would support certain policies, the data also indicates that the method used to raise awareness of these policies and the spokespeople utilised in any communication strategy should be carefully considered to ensure the success of any such campaign.

1.INTRODUCTION

Sugar-sweetened beverages (SSBs) are defined as drinks (hot, cold or powdered) that have been sweetened with any form of added sugar. They include carbonated drinks (sodas), carbonated water, juices, flavoured juice drinks, sports drinks, energy drinks, tea, coffee drinks, sweetened milk/milk alternatives, milk powdered blended drinks, powdered drink mixes and drink mix syrups.

The types of sugar used to sweeten these drinks include brown sugar, corn sweetener, corn syrup, dextrose, fructose, glucose, high-fructose corn syrup, honey, lactose, malt syrup, maltose, molasses, raw sugar and sucrose.

WHO recommends that adults and children reduce their intake of added sugars to less than 10% of their energy intake which equates to consuming no more than 50 grams (or 12 teaspoons) of sugar a day for adults and 25 grams (about 6 teaspoons) of sugar a day for children. Many SSBs contain high quantities of sugar, for example, one 375 ml can of Coca-Cola contains 40 g of added sugar (or 10 teaspoons of sugar). Therefore, consuming just one SSB may exceed WHO's daily recommendation for children and almost exceeds the daily recommendation for adults.

SUGAR-SWEETENED BEVERAGES AND THE PUBLIC'S HEALTH

The overconsumption of SSBs has been linked to weight gain and obesity in adults and children, and obesity or being overweight increases a person's risk of developing a number of NCDs such as type 2 diabetes, stroke, heart disease and cancer. ^{2,4,5,6,9,10}

Studies have not only linked the consumption of SSBs to weight gain and the development of obesity but have linked SSB consumption itself to a decrease in insulin sensitivity, type 2 diabetes, metabolic syndrome and heart disease. Some of the links between SSBs and these health conditions are associated with the weight gain caused by the overconsumption of SSBs, but research shows that SSBs may also have an effect, independent of weight gain, that increases the risk of these diseases. Also some of the links between SSBs and these diseases.

SUGAR-SWEETENED BEVERAGES IN ST KITTS AND NEVIS

Obesity is a significant challenge in St Kitts and Nevis. A PAHO report revealed that 33% of secondary school children in the twin-island state were overweight and 14% were obese. In 2017, a UNICEF report published that 26% of children in St Kitts and Nevis are obese. When looking at adults in St Kitts and Nevis, the PAHO study reported that 34% of adults were overweight and 45% were obese.

It is believed that one factor contributing to the high rate of obesity and weight gain in St Kitts and Nevis is the high consumption of SSBs. In 2010, NutriCoDE found that Caribbean adults had the highest consumption of SSBs out of 187 countries, consuming 1.9 servings of SSBs a day. They also found that 62% of children in St Kitts and Nevis consume at least one carbonated drink per day. This means that through SSB consumption alone adults and children in St Kitts and Nevis are consuming much more than the daily sugar recommendation. Therefore, by reducing the consumption of SSBs, the rates of overweight and obesity may decline.

We embarked on a project to educate the public about the harms of SSBs and to gain public and policymaker support for policies to reduce SSB consumption. To help inform our strategy, we conducted a public opinion survey to obtain data on the public's consumption of SSBs and to understand the public's opinion on approaches to reduce SSB consumption as well as determine what factors would motivate the public to reduce their consumption. This survey was of utmost importance in ensuring that we developed an effective SSB campaign.

2. SURVEY GOALS AND OBJECTIVES

Our survey aimed to understand the public's opinion on topics related to SSBs and NCDs. Specifically, we determined the public's opinion on the importance of the government addressing NCDs, how concerned individuals are about NCDs in St Kitts and Nevis, what beverages the public consumes and how often they consume these. We also explored the factors that may influence the public to reduce their SSB consumption and the public's opinion on a selection of government policies to tackle SSB consumption.

3. SURVEY DESIGN

A short survey was adapted from previous questionnaires utilised by the Global Health Advocacy Incubator's Food Policy Program (please see Appendix 1 for the survey questions). The survey was divided into two sections. The first section focused on the main aim of the survey which was to obtain the public's opinion on NCDs and SSBs, and the second section collected demographic data so that we could understand the background of those completing the survey. Once ethics approval was granted (approval code IERC-2021-03-043), we launched the survey, and the public could complete the survey online or in person with the assistance of an enumerator.



4. METHODOLOGY

A sample size of 382 was calculated based on the population of St Kitts and Nevis (approximately 55,000), and this was calculated at the 95% confidence level to provide a 5% margin of error. A mixture of purposive and convenience sampling methods was used to recruit adults over the age of 18, and our recruitment strategy involved the use of digital and traditional media as well as community outreach. The survey was promoted on Facebook, on our website and on the radio, and we asked our stakeholders to distribute the survey amongst their networks. Additionally, volunteers conducted outreach work in the community to identify suitable participants.

We initially tested the survey with 10 individuals, and following their feedback, we made some minor amendments to the survey to improve the clarity of the questions and then sought to recruit a minimum of 382 people to complete the survey.

As an incentive to complete the survey, participants were able to enter a raffle competition to win a selection of prizes.

The data was analysed and visualized using Excel and Google Forms, and a summary of the results is provided in the next section of this report.

5. RESULTS AND DISCUSSION

A Summary of Our Research Sample

The final research sample consisted of 423 individuals, and looking at the demographic makeup of our sample, there were slightly more females represented in our sample than males with 58% of participants being female and 41% being male as shown in Figure 1.

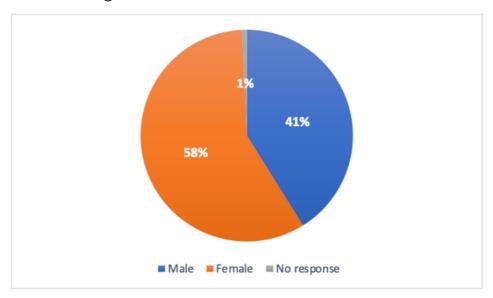


Figure 1: Gender Breakdown of Survey Participants

Additionally, the survey included respondents spanning a wide range of ages with 18–24-year-olds making up the highest number of respondents at 31% (Figure 2). Additionally, 27% were 35-44 years old, 19% were 25-34 years old, 11% were 45-54, 10% were 55-64 years old and 1% were adults older than 64 years old (Figure 2). Based on official population estimates for 2020, we have an underrepresentation of adults over the age of 64. This has been estimated officially to be 10%.¹⁵

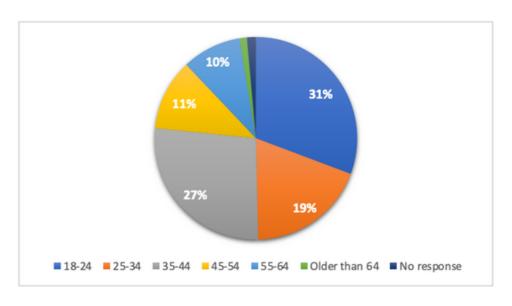


Figure 2: The Age of Survey Participants

With respect to ethnicity, the population of St Kitts and Nevis is known to be predominantly Black, and this survey has confirmed this, with 91% of the respondents identifying as being from this ethnic group. This aligns with the 2011 census data which found that 92% of the population was Black.¹⁶

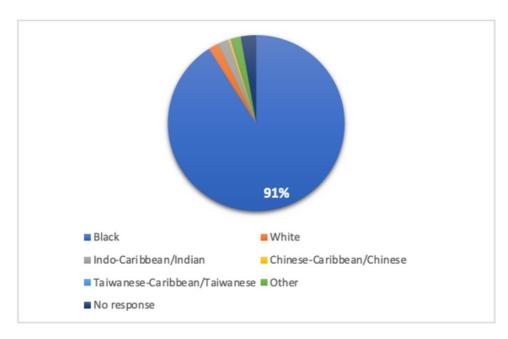


Figure 3: The Ethnicity of Participants

Of the respondents that completed this survey, 90% were from St Kitts, while 9% were from Nevis. This data shows an underrepresentation of Nevis, as based on 2011 census data, 74% of the population of St Kitts and Nevis resides on St Kitts and 26% on Nevis. 16

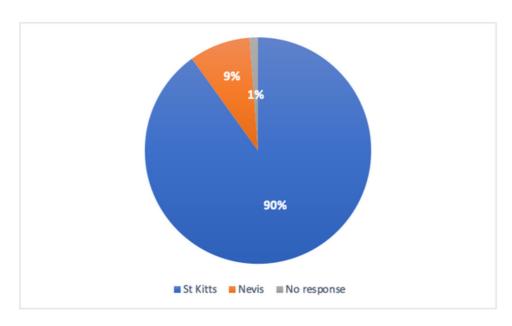


Figure 4: Island of Residence of Participants

Respondents were made up of persons from various socio-economic strata with 39% of respondents earning less than \$50,000 XCD per year, 30% of respondents were unemployed, and 23% of respondents earned between \$50,001 and \$150,000 XCD per year. The unemployment rate is currently very high, and this is attributed to the financial challenges the country currently faces with regards to the COVID-19 pandemic. Before the pandemic, the country's unemployment rate was 5.1%.

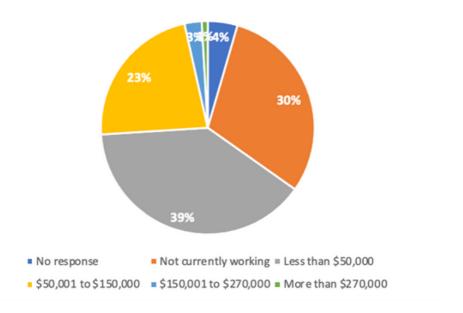


Figure 5: Annual Income of Participants

Finally, the data reveals that our respondents were highly educated with 65% of this population having an associate's degree or higher.

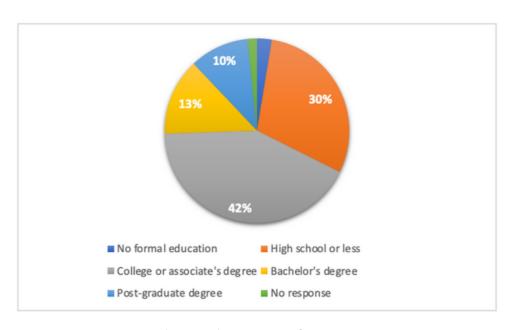


Figure 6: Educational Attainment of Survey Participants

Overall, we believe our population is generally representative of the wider population although there is a slight underrepresentation of the elderly, men and Nevisians.

PARTICIPANTS' VIEWS ON OVERWEIGHT, OBESITY AND NCDS

When asked how concerned participants were about three interconnected health issues in St Kitts and Nevis, namely overweight, obesity and NCDs, 66% of persons viewed overweight, obesity and NCDs as a major problem (Figure 7), and as shown in Figure 8, the data indicates that females are slightly more concerned than males about the impact of overweight, obesity and NCDs.

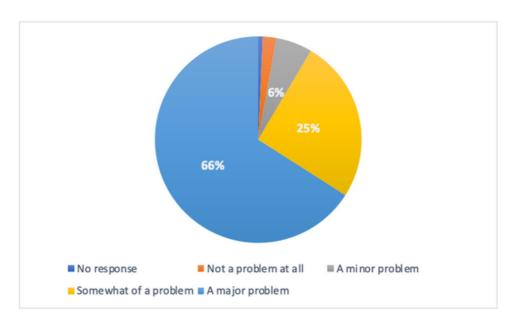


Figure 7: Participants' Views on the Impact of Overweight, Obesity and NCDs in St Kitts and Nevis

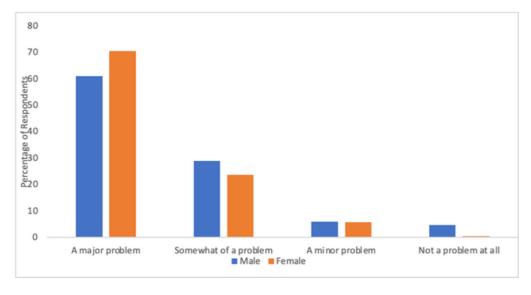


Figure 8: Gender Differences on the Impact of Overweight, Obesity and NCDs

The relatively high rate of concern about these health conditions could be linked to the high rate of NCDs, obesity and overweight that participants reported within their households. The survey indicated that 43% of respondents have someone in their household living with high blood pressure, while 35% of the population have someone in their family who is overweight or obese. Furthermore, 33% have someone in their household living with diabetes (Figure 9). This data, along with the high level of concern expressed by the public, highlights the need for interventions focused on the prevention and control of NCDs. NCD and obesity prevention interventions would be welcomed by the public as there is a high level of public support for the government taking the necessary steps to prevent overweight, obesity and NCDs – 83% of respondents felt it was either very important or important for the government to implement strategies to tackle these public health issues.

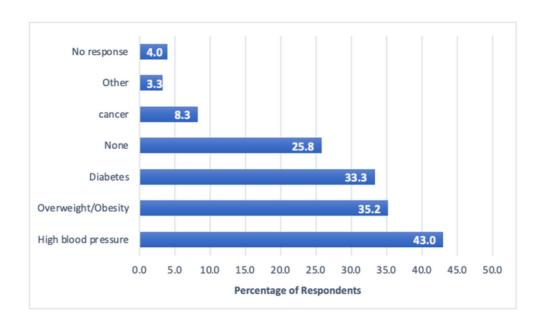


Figure 9: The Prevalence of Overweight, Obesity and NCDs in the Households of Participants

One approach the government can consider to address the high rate of overweight, obesity and NCDs is the reduction of the public's consumption of SSBs. As mentioned previously, the overconsumption of SSBs has been linked to weight gain and obesity in adults and children, and obesity or being overweight increases a person's risk of developing a number of NCDs such as type 2 diabetes, stroke, heart disease and some types of cancers.^{2,4,5,6,9,10}

Our survey identified high levels of SSB consumption amongst respondents. We found that 62% of respondents consume an SSB one or more times per day and that there is a higher rate of SSB consumption in males compared to females (Figure 10).

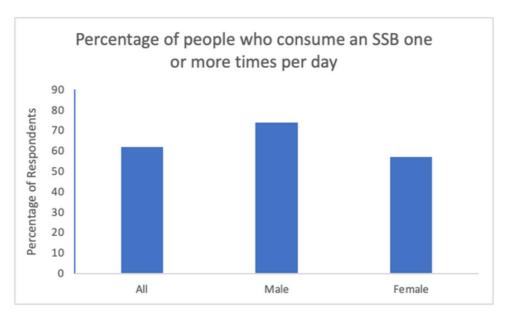


Figure 10: SSB Consumption

There are several strategies that the government can utilise to reduce SSB consumption. Two important approaches include introducing evidence-based health policies and public education on the health harms of SSBs. With regards to policies, our survey suggests that there is scope for the government to introduce policies to assist in the reduction of SSB consumption, as there would be public support for these, depending on the policy. Our data (Figure 11) suggests that there is large public support for the introduction of a public drinking water infrastructure (70% of respondents were in favour of this policy) and significant support for banning the sale of sweet drinks in schools (43% were in favour), while there is low-level support for introducing a tax on sweet drinks (20% were in favour). However, if the revenue received from taxes is used for health initiatives, there is a twofold increase in support of an SSB tax (41% were in favour). Tax revenue could be used to implement popular policies such as the introduction of a public drinking water infrastructure, and if this is communicated to the public, this is likely to result in more support for the tax. It is also important to note that there has been no national public education campaign on the harms of SSBs and the health benefits of the above-mentioned policies; therefore, the implementation of such a campaign could lead to an increase in public support of these policies.

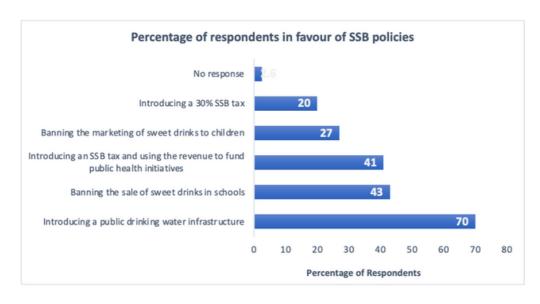


Figure 11: Public Support of SSB Policies



With regards to the second approach that can be explored to reduce SSB consumption – public education – our data suggests that this could be effective, but care must be taken as to how this strategy is implemented with regards to who should be involved in educating the public and the communication methods employed. Based on the public's response, approaches that could lead to a reduction in SSB consumption and support for health promotion policies include

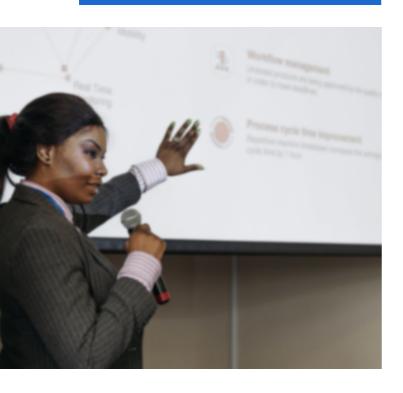
An approach that provides the public with

A CLEAR UNDERSTANDING OF THE HARMFUL HEALTH EFFECTS OF SSBS

71% of respondents felt that this would motivate them to reduce how often they consume SSBs

ADVERTISING

38% of respondents stated that adverts on TV, radio, on billboards and in the newspaper reminding them to drink fewer SSBs would motivate them to reduce their consumption of SSBs



UTILIZING DOCTORS AND HEALTH EXPERTS

to communicate the message about the health harms of SSBs

- a. 54% of respondents said that if health experts stated that SSBs were linked to obesity, weight gain and other health issues, this is likely to result in them reducing how often they consume SSBs
- b. 70% have a high level of trust in doctors and health experts when it comes to health messages about SSBs
- c. 50% have a high level of trust in the Ministry of Health when it comes to health messages about SSBs
- d. The public was somewhat likely to trust NGOs and sports personalities when it comes to health messages about SSBs
- e. The public was less likely to trust celebrities, the media, DJs/radio personalities, musicians/soca artists, social media influencers, the food and beverage industry and elected officials when it comes to health messages about SSBs

Whilst SSB policies and a public education campaign that utilises health experts and the media are likely to be important factors in facilitating a behaviour change in the public, some practical and social approaches could also be effective amongst some members of the public. These include

INCREASING THE PRICE OF SSBS

this can be achieved through a policy of SSB taxation

31% of respondents said that if SSBs were made more expensive, this would result in them consuming fewer SSBs

SOCIAL NETWORK – some members of the public would respond to their social network

- a. 30% of respondents stated that a friend or family members suggesting that they reduce their SSB consumption would motivate them to reduce their consumption of SSBs
- b. 22% of people said that someone who they perceived to be influential could convince them to reduce their SSB consumption



6. CONCLUSION & RECOMMENDATIONS

Our data suggests that St Kitts and Nevis has a high rate of overweight, obesity and NCDs, which aligns with previously published data. The high rate of NCDs is leading to the premature death of our citizens with 63% of deaths in the Federation being attributed to NCDs. Our survey shows that the public is very concerned about the health of the nation and strongly believes that the government has a role to play in improving the country's health by tackling overweight, obesity and NCDs. Therefore, action is needed, and as research has linked SSBs to weight gain, obesity and the development of NCDs, reducing SSB consumption is just one of many approaches that can be explored to address these health issues especially as we have found that SSB consumption amongst our survey population is high.

The introduction of SSB policies by the government can be an important component in reducing SSB consumption. Our data suggests that there is some public support for these policies and further public support could be obtained if carefully designed public education campaigns are implemented. Our survey also shows that although policies and education campaigns are welcomed by the public, the delivery of the message around SSBs and the people communicating that message will dictate if the message is well received and then acted on; therefore, the government and public health professionals have to be strategic in their approach.

IN LIGHT OF THIS, WE WILL

- Utilise the data from this survey to inform our You're Sweet Enough campaign which aims to educate the public about the health harms of SSBs and build public and policymaker support for interventions to reduce SSB consumption
- Continue to work with the Ministry of Health as we implement our You're Sweet Enough campaign
- Provide clear evidence-based messages about the harms of SSBs
- Collaborate with health experts to educate the public about the harms of SSBs
- Utilise a mixture of communication strategies to engage the public on the harms of SSBs
- Work with the Ministry of Health to build public, private sector, civil society and wider government support for policy interventions to reduce SSB consumption

WE RECOMMEND THAT THE MINISTRY OF HEALTH

- Expedites the process of finalising their SSB policy because this includes a comprehensive set of much-needed policy imperatives to reduce SSB consumption. Any further delay will have an impact on the country's ability to tackle NCDs.
- Works with the Water Services Department and other relevant organisations
 to explore the implementation of a public drinking water infrastructure. This
 would enable the Ministry of Health to focus on an intervention that has a high
 level of public support. Additionally, such an infrastructure would ensure that
 the public has access to free, safe drinking water and would enable the public
 to easily make water their drink of choice.
- Works with the Ministry of Finance to ensure that any revenue from an SSB tax is allocated to public health initiatives
- Works with the Ministry of Education to create an SSB policy for schools which would involve restricting the sale of SSBs in and around schools and creating an SSB-free school environment. This would begin the process of enacting a policy that has some public support and, most importantly, begins to foster healthy habits in the next generation, leading to a reduction of their risk of developing obesity and NCDs.
- Identifies suitable health educators and health professionals to communicate the key messages around SSBs and work with them to create education sessions to inform the public about the harmful effects of consuming SSBs
- Develops clear and understandable messaging on the harmful effects of SSBs

7. REFERENCES

- 1. Alvarado, M. et al. (2018). Assessing the impact of the Barbados sugar sweetened beverage tax on grocery store beverage sales: an interrupted time series analysis.
- 2. Bleich, S. and Vercammen, K. (2018). The Negative Impact of Sugar-Sweetened Beverages on Children's Health: An Update of the Literature. BMC Obesity, 5 (1), pp. 1-27.
- 3. Colchero, M., Rivera-Dommarco, J., Popkin, B. and Ng, S. (2017). In Mexico, Evidence of Sustained Consumer Response Two Years After Implementing A Sugar Sweetened Beverage Tax. Health Affairs, 36(3).
- 4. Malik, V., Pan, A., Willett, W. and Hu F. (2013). Sugar-sweetened beverages and weight gain in children and adults: a systematic review and meta-analysis. The American Journal of Clinical Nutrition, 98 (4), pp. 1084–1102.
- 5. Malik, V., Popkin, B., Bray, G., Després, J., and Hu, F. (2010). Sugar-sweetened beverages, obesity, type 2 diabetes mellitus, and cardiovascular disease risk. Circulation, 121, pp. 1356–64.
- 6. Malik, V., Popkin, B., Bray, G., Després, J., Willett, W., Hu, F. (2010). Sugar-sweetened beverages and risk of metabolic syndrome and type 2 diabetes: a meta-analysis. Diabetes Care 33, pp. 2477–83.
- 7. Pan American Health Organisation (2012). Health in the Americas 2012: St Kitts and Nevis [Online]. Available at: https://www.paho.org/salud-en-las-americas-2012/index.php?option=com_docman&view=download&category_slug=hia-2012-country-chapters-22&alias=145-saint-kitts-nevis-145&Itemid=231&lang=en
- 8. Rethink Sugary Drinks, (2018). How much sugar is in...? [Online] Available at: http://www.rethinksugarydrink.org.au/how-much-sugar
- 9.Scharf, R. and DeBoer, M. (2016). Sugar-Sweetened Beverages and Children's Health. Annu Rev Public Health, 37, pp. 273-93.
- 10. Stanhope, K., Schwarz, J., Keim, N., Griffen. S., Bremer, A., Graham, J., Hatcher, B., Cox., C., Dyachenko, A., Zhang, W. et al. (2009). Consuming fructose-sweetened, not glucose-sweetened, beverages increase visceral adiposity and lipids and decreases insulin sensitivity in overweight/obese humans. J Clin Invest, 119, pp. 1322–34.
- 11. UNICEF, (2017). Situation Analysis of Children in the Federation of St Kitts and Nevis. Bridgetown: UNICEF Office for the Eastern Caribbean Area and the Government of St Kitts and Nevis, pp. 12-79.

- 11. WHO, (2017) Reducing consumption of sugar-sweetened beverages and their negative health impact in Estona. Copenhagen: World Health Organiation. Licence: CC BY-NC-SA 3.0 IGO
- 12. Xuereb, G. (2017). Sugar Sweetened Beverages Taxes in the Caribbean Progress and Challenges.
- 13. Yang, L. et al. (2017). Consumption of Carbonated Soft Drinks Among Young Adolescents Aged 12 to 15 Years in 53 Low- and Middle-Income Countries. American journal of public health, 107(7), pp 1095-1100.
- 14. CIA World Factbook St Kitts and Nevis. www.cia.gov . Retrieved 14th April 2021.
- 15. Country Report: Saint Kitts and Nevis. Retrieved on 14th April 2021

8. APPENDIX

■ A major problem

Survey Questions

1.In your opinion, how much of a problem are obesity, overweight and non-communicable diseases (NCDs) in St Kitts and Nevis?

NB: NCDs are long-term (chronic) diseases that are not passed from person to person. They include diseases such as cancer, diabetes, heart disease, lung disease and stroke. Obesity refers to a condition where an individual is very overweight.

	Somewhat of a problem
	A minor problem
	Not a problem at all
	How important do you think it is for the Government of St Kitts and Nevis to take steps to revent overweight, obesity and NCDs?
	Very important
	Important
	Somewhat important
	Not very important
	Not important at all
St NB. tec	Banning the marketing of sweet drinks to children Introducing a tax on sweet drinks, which would increase the price of each drink by 30% Introducing a tax on sweet drinks and then using the money raised from this tax to fund public health projects Introducing a public drinking water infrastructure (e.g., water fountains installed across St

4.In the last week, how often did you drink the following?

		4-6 times	2-3 times	Once a	2-5 times	Once a	Novor
	a day	day	a day	day	a week	week	Never
WATER							
SODA							
SPORTS DRINK (e.g., Lucozade, Gatorade)							
ENERGY DRINK (e.g., Red Bull)							
A SWEETENED IMPORTED FRUIT DRINK/JUICE (e.g., Sunny Delight)							
A SWEETENED IMPORTED FRUIT DRINK/JUICE (e.g., Sunny Delight)							
A SWEETENED LOCALLY MADE OR HOMEMADE FRUIT JUICE (e.g., passion fruit)							
MALT							
SWEETENED MILK/MILK- BASED DRINK (e.g., chocolate milk, full-fat milk, low-fat milk)							
SWEETENED MILK ALTERNATIVES (e.g., almond milk)							
SWEETENED TEA/COFFEE [SB1] DRINKS							

5. How much would you trust the following when it comes to health messages about sweet drinks?

	> 6 times a day	4-6 times day	2-3 times a day	Once a day	2-5 times a week	Once a week	Never
THE MINISTRY OF HEALTH							
NGOS/CHARITIES							
FOOD AND BEVERAGE COMPANIES							
DOCTORS AND HEALTH EXPERTS							
THE MEDIA							
ELECTED OFFICIALS							
CELEBRITIES							
SPORTS PERSONALITIES							
DJS/RADIO PERSONALITIES							
MUSICIANS/SOCA ARTISTS							
SOCIAL MEDIA INFLUENCERS							

	Which of the following would motivate you to reduce how often you consume sweet drinks? ck all that apply)
	If health experts stated that sweet drinks were linked to obesity, weight gain and other health issues
	Having a clear understanding of the health harms of sweet drinks
	An influential person suggesting that the public reduce their consumption
	A friend or family member suggesting that I reduce my consumption
	If sweet drinks were made more expensive
	Adverts on TV, radio, on billboards and in the newspaper reminding me to drink fewer
	sweet drinks
AB	OUT YOU
	Do any members of your household have any of the following health conditions? (Tick all that ply)
	Overweight/obesity
	Diabetes
	High blood pressure
	Cancer
	Other health condition
8.\	What is your age?
	18-24
	25-34
	35-44
	45-54
	55-64
	> 64
9.V	Vhat is your gender?
	Male
	Female

10.What is your ethnicity?						
	Black					
	White					
	Indo-Caribbean/Indian					
	Chinese-Caribbean/Chinese					
	Taiwanese-Caribbean/Taiwanese					
	Other					
11.\	11.Where do you live?					
	St Kitts					
	Nevis					
12.	What is your highest level of education?					
	No formal education					
	High school or less					
	College or associate's degree					
	Bachelor's degree					
	Post-graduate degree					
13.What is your annual income?						
	Not currently working					
	< \$50,000 XCD					
	\$50,001 XCD to \$150,000 XCD					
	\$150,001 XCD to \$270,000 XCD					
	> \$270,000 XCD					

Thank you for taking the time to complete this survey. We really appreciate it.