We used a variety of data sources to evaluate sugary drink advertising in the United States. Through publicly available data, we document sugary drink and energy drink nutrition and advertising. Whenever possible, we used the same methods as our previous report, "Sugary Drink FACTS: 2014"[1] to measure changes over time.

Our methods include evaluating the nutrition content of sugary drinks, as well as energy drinks and energy shots, and analyzing syndicated data on advertising spending and TV advertising exposure from Nielsen. These methods are described in detail in the following sections.

We did not have access to beverage industry proprietary documents, such as privately commissioned market research, media, and marketing plans, or other strategic documents. Therefore, we do not attempt to interpret beverage companies' goals or objectives for their marketing practices.

Rather, we provide transparent documentation of:

- The nutrition content and ingredients in sugary drinks and energy drinks;
- Advertising expenditures in all measured media, and comparisons to advertising for diet drinks;
- The extent of exposure to TV advertising by preschoolers, children, and teens;
- TV advertising targeted to Black and Hispanic youth, including on Spanish-language TV; and
- Changes in advertising spending and exposure that occurred from 2010 and 2013 to 2018.

Scope of the analysis

These analyses focus on **sugary drinks**, defined as any non-alcoholic refreshment beverage containing any added sugars, including sugar from all sources except fruit juice concentrate, fruit juice, or fruit puree. We also include diet energy drinks and energy shots in our analyses of unhealthy drinks. In some analyses, we also include diet soda and other diet drinks for comparison purposes. This report excludes children's sugary drinks (drinks that are marketed as intended specifically for children), which were previously reported in the Rudd Center's 2019 Children's Drink FACTS report.[2]

To narrow down the list of drink products to evaluate, we utilized Nielsen data to identify sugary drink and energy drink brands that spent more than $100,000 on advertising in 2018, excluding children's drinks that were previously reported. We also identified diet drinks in the same categories.

Sugary drink market

We assigned a company, brand, sub-brand (if applicable), and drink category designation to all products identified above.

- **Company** refers to the company listed on the product package or that owns the official website for the product.
- **Brand** refers to the main marketing unit for each beverage. Brands may include numerous flavors or varieties of the same product (e.g., Gatorade Flow, Gatorade Frost, Gatorade G2). Brands can also have products in multiple drink categories (e.g., Glaceau Vitaminwater flavored water and Vitaminwater Zero diet drink, Snapple fruit drinks and Snapple iced tea). When a brand offered products in more than one category, each brand/category combination is presented separately in our analyses. For example, advertising for Snapple iced tea and Snapple fruit drinks are identified separately.
- **Sub-brand** is a subset of products within a brand that differ substantially in nutrition quality and/or product category. For example, Coca-Cola advertises both full-calorie Coke and reduced-calorie Coke Life. Results for the Coke regular soda brand includes both sub-brands, but advertising that specifically identifies either full-calorie Coke or Coke Life is also described separately in the results. Products with significant amounts of advertising spending are also included as separate sub-brands (e.g., Sprite Cranberry and Sprite [original]).
- **Varieties** include different flavors and/or package sizes of a brand or sub-brand. Individual varieties are highlighted or described in more detail in the nutrition section.

Drink categories

Category describes the type of beverage (e.g., regular soda, sports drink). The beverage categories in this report include products that tend to be grouped together in industry reports and previous research on sugary drink consumption.

We assigned all sugary drink and energy drink brands to one the following six categories:

- **Sugary drinks** refer to all drinks than contain any added sugar. These drinks may contain zero-calorie sweeteners, in addition to added sugar.
  - ❑ **Fruit drinks** are fruit-flavored drinks with added sugar and may or may not contain some juice. Manufacturers refer to these products as juice drinks, juice beverages, fruit cocktails, and fruit-flavored drinks/beverages. Children's fruit drinks are excluded from this category.
  - ❑ **Flavored water** includes non-carbonated drinks with added sugar described as a "water beverage" on the product container or that include "water" in the product name. Children's flavored water are excluded from this category.

- ❑ **Iced tea** includes ready-to-serve drinks and drink mixes that are primarily described as "tea" on the product package and typically served cold.
- ❑ **Regular soda** refers to carbonated, sugar-sweetened soft drinks. These products are also known as "pop." This category includes all products that contain any added sugar, including "lower-calorie" products that contain less added sugar and zero-calorie sweeteners.
- ❑ **Sports drinks** are marketed as drinks intended to accompany physical activity and/or improve hydration or performance. They may contain the phrase "sport drink" on product packaging or in promotion materials. Ready-to-serve and drink mix varieties are included in this category.

- **Energy drinks** are caffeinated beverage products labeled by the manufacturer as "energy drink" or "energy supplement." This category includes carbonated, canned varieties, with or without added sugar, as well as concentrated **energy shots** (sold in 1.93-oz containers).

As a point of comparison with sugary drinks, we also analyzed advertising for **diet drinks** (diet soda and other diet drinks) offered by brands that also offer sugary drinks.

- **Diet soda** refers to carbonated soft drinks with zero-calorie sweeteners and no added sugar.
- **Other diet drinks** include fruit drink, flavored water, sports drink, and iced tea products that do not contain added sugar. They often contain zero-calorie sweeteners, but not always. Plain and sparkling unsweetened water and 100% fruit juice are excluded from this category.

Nutrition content

We collected nutrition information for all sugary drinks and energy drinks in our analysis from company or brand websites in December 2019 to February 2020. If nutrition and/or ingredient information was not provided online, researchers visited local stores to obtain nutrition information on beverage packaging. In some cases, products had to be ordered online because they could not be found in stores. If information was still missing after searching online and in stores, researchers contacted company customer service representatives via telephone to obtain the necessary information.

Across drink brands, available single-serve container sizes varied greatly, making it difficult to compare calorie and sugar content between drink categories and brands. The reported serving size for each variety was determined based on available single-serve containers within each sub-brand. Nutrition information is reported for a 12-ounce single-serve container size when available. If the product did not come in a 12-ounce container, then nutrition information for the single-serve container size closest to 12 ounces is reported. In cases where the nutrition facts panel information was not reported for the entire single-serve container, researchers calculated the content for the entire container based on the given nutrition facts per serving. For example, Rockstar only reported nutrition information for an 8-ounce serving on some 16-ounce cans. If nutrition information was not available for a single-serve container, then nutrition for a 12-ounce serving was reported based on the nutrition facts panel information on a multi-serve container, including on containers that reported nutrition information for an 8-ounce serving size.

We report the following measures of nutrition content for the sugary drink and energy drink products in our analysis:

- **Nutrition information** includes calorie and sugar content per serving reported on nutrition facts panels. Median and range per serving are reported by brand/sub-brand and category.
- **Ingredient information** includes caffeine content (mg per serving), juice content (reported as % of total volume), and the presence of zero-calorie sweeteners (yes or no). Zero-calorie sweetener content was obtained from product ingredient lists, and caffeine and juice amounts were obtained from additional information provided on product packaging and/or company websites.
- **Zero-calorie sweeteners** refer to all nonnutritive (non-caloric) sweeteners, including artificial and natural sweeteners and sugar alcohols. Artificial sweeteners in this report include acesulfame potassium, aspartame, sucralose, and neotame. Natural sweeteners reported include stevia (also called rebiana or Reb A) and monk fruit extract. The only sugar alcohol found in drinks in this report was erythritol.

Advertising

To analyze advertising spending and TV advertising exposure, we licensed 2018 data from Nielsen in the following non-alcoholic beverage categories: drink product, soft drink, regular soft drink, diet soft drink, drinks-isotonic, bottled water, fruit drinks, fruit juice, iced tea, drink mix, iced tea mix, and drink mix-isotonic. These Nielsen categories incorporate all of the sugary drink and diet drink categories in our analysis.

However, the Nielsen categories and brands do not always correspond directly with the categories and brands in our analyses. For example, Nielsen's drink-isotonic category includes both energy drinks and sports drinks, and its bottled water category includes both plain and flavored water. Therefore, we used the descriptions provided by Nielsen to assign each Nielsen brand to the appropriate brand, sub-brand, and category in our analysis. In some cases, the description could apply to more than one brand and/or category (e.g., Coca-Cola soft drinks). When brands included products in more than one sub-brand or category and the Nielsen data did not specify the product advertised, we assigned the brands to one of two brand-level categories.

- The **soda brand** category includes brand-level advertisements that cannot be classified as either regular or diet soda advertising. Soda brands sometimes advertise both regular and diet versions of the brand in the same advertisement, or they advertise the brand (e.g., Coke) but not a specific product (e.g., Coke Classic or Diet Coke). In these instances, Nielsen classifies the category as "soft drink."
- Brand-level advertising that promotes products in other (not soda) drink categories are categorized as **drink brand** advertising. For example, some Snapple advertising is classified by Nielsen as "drink products." This advertising supports Snapple products in multiple categories, including fruit drinks, regular iced tea, and diet iced tea products. The drink brand category also includes advertising that promotes a company but does not identify a specific brand (e.g., Dr Pepper Snapple Group). These ads are also categorized as "drink products" by Nielsen.

In all advertising analyses, soda brand and drink brand advertising are identified separately, unless otherwise noted.

Advertising spending

Nielsen tracks total media spending in 18 different media including TV (including Spanish-language TV), internet, radio, magazines, newspaper, free standing insert coupons (FSIs), and outdoor advertising. These data provide a measure of **advertising spending**. We licensed these data for all non-alcoholic beverage categories for 2018 and report these numbers by category, company, and brand/sub-brand.

TV advertising exposure

To measure exposure to TV advertising, we also licensed 2018 gross rating points (GRP) data from Nielsen for the same beverage categories. GRPs measure the total audience delivered by a brand's media schedule. They are expressed as a percent of the population that was exposed to each commercial over a specified period of time across all types of TV programming. GRPs are the advertising industry's standard measure to assess audience exposure to advertising campaigns, and Nielsen is the most widely used source for these data.[3] GRPs, therefore, provide an objective assessment of advertising exposure.

In addition, GRPs can be used to measure advertisements delivered to a specific audience, such as age or other demographic groups (also known as target rating points, or TRPs), and provide a per capita measure to examine relative exposure between groups. For example, if a sugary drink brand had 2,000 GRPs in 2018 for 2- to 5-year-olds and 1,000 GRPs for 25- to 49-year-olds, then we can conclude that preschoolers saw twice as many ads for that brand in 2018 compared with adults.

The GRP measure differs from the measure used to evaluate food industry compliance with their CFBAI pledges. The pledges apply only to advertising in children's TV programming as defined by audience composition (e.g., programs in which at least 35% of the audience are younger than age 12).[4] However, less than one-half of all advertisements viewed by children younger than 12 occur during children's programming.[5] In contrast, GRPs measure children's total exposure to advertising during all types of TV programming. Therefore, GRPs indicate whether participating companies reduced total TV advertising to this age group.

In the TV advertising analyses, we obtained 2018 GRP data by age group and race. We obtained total GRPs for the following age groups: preschoolers (2-5 years), children (6-11 years), teens (12-17 years), and adults (18-49 years). These data provide total exposure to national (network, cable, and syndicated) and local (spot market) TV combined.

Nielsen calculates GRPs as the sum of all advertising exposures for all individuals within a demographic group, including multiple exposures for individuals (i.e., gross impressions), divided by the size of the population, and multiplied by 100. Because GRPs alone can be difficult to interpret, we also use GRP data to calculate the following TV advertising measures:

- **Average advertising exposure.** This measure was calculated by dividing total GRPs for a demographic group during a specific time period by 100. It provides a measure of ads viewed by individuals in that demographic group during the time period measured. For example, if Nielsen reports 2,000 GRPs for 2- to 5-year-olds for a brand in 2018, we can conclude that on average all 2- to 5-year-olds viewed 20 ads for that brand in 2018.
- **Youth-targeted ratios.** As GRPs provide a per capita measure of advertising exposure for specific demographic groups, we also used GRPs to measure relative exposure to advertising between demographic groups. We report the following targeted GRP ratios:
  - ❏ Preschooler-targeted ratio = GRPs for 2-5 years/GRPs for 18-49 years
  - ❏ Child-targeted ratio = GRPs for 6-11 years/GRPs for 18-49 years
  - ❏ Teen-targeted ratio = GRPs for 12-17 years/GRPs for 18-49 years

A targeted ratio greater than 1.0 indicates that on average persons in the group of interest (e.g., children in the child-targeted ratio) viewed more advertisements than persons in the comparison group (i.e., adults). A targeted ratio of less than 1.0 indicates that the person in the group of interest viewed fewer ads. For example, a child-targeted ratio of 2.0 indicates that children viewed twice as many ads as adults viewed.

To identify advertising targeted to preschoolers, children, and teens, we compared youth-targeted ratios for categories, companies, and brands/sub-brands to the average time

spent watching TV for youth in each age group compared to adults (**TV viewing time ratios**). If the youth-targeted ratio is greater than the relative difference in the amount of TV viewed by each group, we can conclude that the advertiser likely designed a media plan to reach this age group more often than would occur naturally.

The average weekly amount of time spent watching TV in 2018 was obtained from Nielsen Market Breaks for each youth age group and adults. The following 2018 TV viewing time ratios were used for comparison: 0.87 for preschoolers versus adults, 0.66 for children, and 0.50 for teens. These viewing time ratios were all less than 1.0, which indicates that youth in all age groups watch less TV on average than adults watch.

Targeted advertising

To assess exposure by Hispanic youth to Spanish-language advertising, we provide advertising spending and GRP data for advertising that occurred on Spanish-language TV.

- **Spanish-language TV.** TV programming presented on Spanish cable and broadcast networks (e.g., Univision, Telemundo).
- **Spanish-language TV ads viewed.** Spanish-language TV ads viewed by preschoolers (2-5 years), children (6-11 years), and teens (12-17 years) living in Hispanic households.

We also obtained GRPs for advertising viewed by Black and White youth in the same age groups on national TV to assess advertising targeted to Black youth. Nielsen does not provide spot market GRPs for Black consumers at the individual level. Spot TV advertising accounted for about 2% of all beverage advertising viewed by children and teens during 2018.[6] Therefore, these data reflect an estimated 98% of Black youth exposure to all beverage advertising on TV.

- **Black-targeted ratios.** We also used GRPs to measure relative exposure to advertising between Black and White youth in the same groups. We report the following targeted GRP ratios:
  - Black preschooler-targeted ratio = GRPs for Black preschoolers 2-5 years/GRPs for White preschoolers 2-5 years. This measure uses only national GRPs.
  - Black child-targeted ratio = GRPs for Black children 6-11 years/ GRPs for White children 6-11 years. This measure uses only national GRPs.
  - Black teen-targeted ratio = GRPs for Black teens 12-17 years/GRPs for White teens 12-17 years. This measure only uses national GRPs.

To identify advertising targeted to Black preschoolers, children, and teens, we compared Black-targeted ratios for categories, companies, and brands/sub-brands to the average time spent watching TV for Black versus White youth in each age group. If the Black-targeted ratio is greater than the relative difference in the amount of TV viewed by each group, we can conclude that the advertiser likely designed a media plan to reach Black youth more often than would occur naturally.

The average weekly amount of time spent watching TV in 2018 was obtained from Nielsen Market Breaks for Black and White youth in each age group. The following 2018 TV viewing time ratios were used for comparison: 1.39 for Black versus White preschoolers, 1.69 for children, and 1.78 for teens. Viewing time ratios higher than 1.0 indicate that Black youth in all age groups watch more TV on average than White youth in the same age group watch.

Changes in advertising from 2013 and 2010

To report changes in advertising spending and TV advertising exposure we utilized Nielsen advertising data from 2010 and 2013 previously reported in Sugary Drink FACTS 2014.[7] The analyses of 2018 advertising data in this report used the same methods as the previous report with a few exceptions. In these cases, 2010 and 2013 advertising data were adjusted to provide a valid comparison to 2018 data as follows:

- This report excludes children's drinks that were previously reported in Children's Drink FACTS.[8] Children's sugary drink brands were removed from the advertising data for 2010 and 2013 (fruit drink and flavored water categories) to provide a valid comparison to advertising for these categories in 2018.
- Drink mixes were not included in the previous report. For this report, we included iced tea and sports drink mixes in the 2018 advertising data and added drink mix advertising to the previously reported 2010 and 2013 advertising numbers for those categories. No other category advertised drink mix products.
- For this report, we included Pepsi Lipton as a separate company. Pepsi Lipton is a joint venture between PepsiCo and Unilever to sell and market their Lipton, Brisk, and Pure Leaf iced tea brands. These brands had been previously reported as PepsiCo or Unilever company brands. We reclassified the 2010 and 2013 advertising data for these brands as Pepsi Lipton company brands to report changes for PepsiCo, Unilever, and Pepsi Lipton companies over time.
- Ad exposure for Black and White preschoolers and children had been combined into one age category in 2010 and 2013: Black and White children (2-11 y). In this report, we report Black and White preschoolers (2-5 y) and children (6-11 y) separately. To compare 2018 ad exposure to previous years, we averaged ad exposure for Black and White preschoolers and children in 2018 and compared it to the combined age groups in 2013 and 2010.

Endnotes

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