Trends in food and beverage TV brand appearances viewed by children and teens from 2009 to 2014 in the United States

## Supplementary Materials

## Nielsen Data

TV programming recorded by Nielsen for brand appearance analysis included all United States prime-time programming (see table S1) daily during 16 of the most viewed broadcast and cable TV channels: ABC, CBS, NBC, FOX, CW, A\&E, Bravo, DSC, ESPN, FX, LIFE, NAN, TBS, TLC, TNT, and USA. Nielsen analysts reviewed the recordings using standardized identification procedures to count number and duration of all brand appearances. The data excluded appearances on sports, news magazine, and holiday programming, theatrical movie broadcasts, and police shows. ${ }^{(1)}$

## Occurrence and exposure measures

The total number of brand appearances quantifies the total number of brand appearances occurring in primetime TV programming, irrespective of their viewership (i.e., occurrences). To quantify exposure to these brand appearances and to traditional commercials amongst different age groups, researchers used Nielsen gross ratings points (GRPs). GRPs quantify the audience that viewed a brand appearance or advertisement expressed as a percentage of the population exposed over a specified period of time across all types of TV programming. To calculate GRPs, Nielsen combines household member viewing data from its TV-viewing household panel with the number of brand appearances and commercials on each program. Nielsen GRPs are the advertising industry standard used to assess exposure to ad campaigns, and provide an objective assessment of brand appearances and advertisements viewed. GRPs can also be used to provide per capita measures of brand appearances or ads viewed by individuals in specific demographic groups. In the present study, Nielsen age
breaks of 2-11 years and 12-17 years were used to quantify appearances and ads viewed by children and adolescents. The number of brand appearances or ads viewed by members of each age group, on average, was calculated by dividing the respective total GRPs for each age group by 100 .

## References

1. Nielsen (2014) Audience measurement: Television.
http://www.nielsen.com/us/en/solutions/audience-measurement.html (Accessed March, 2015).

Table S1. Nielsen prime-time programming coverage

|  | Monday-Friday | Saturday | Sunday | Other |
| :--- | :--- | :--- | :--- | :--- |
| ABC | $8 \mathrm{pm}-11 \mathrm{pm}$ | $8 \mathrm{pm}-11 \mathrm{pm}$ | $7 \mathrm{pm}-11 \mathrm{pm}$ |  |
| CBS | $8 \mathrm{pm}-11 \mathrm{pm}$ | $8 \mathrm{pm}-11 \mathrm{pm}$ | $7 \mathrm{pm}-11 \mathrm{pm}$ | Late night <br> programming <br> Late night <br> programming |
| NBC | $8 \mathrm{pm}-11 \mathrm{pm}$ | $8 \mathrm{pm}-11 \mathrm{pm}$ | $7 \mathrm{pm}-11 \mathrm{pm}$ | Late night <br> programming |
| FOX | $8 \mathrm{pm}-10 \mathrm{pm}$ | $8 \mathrm{pm}-10 \mathrm{pm}$ | $7 \mathrm{pm}-10 \mathrm{pm}$ |  |
| CW | $8 \mathrm{pm}-10 \mathrm{pm}$ | N/A | $7 \mathrm{pm}-10 \mathrm{pm}$ |  |
| A\&E | $6 \mathrm{pm}-12 \mathrm{am}$ | $6 \mathrm{pm}-12 \mathrm{am}$ | $6 \mathrm{pm}-12 \mathrm{am}$ |  |
| BRAVO | $6 \mathrm{pm}-12 \mathrm{am}$ | $6 \mathrm{pm}-12 \mathrm{am}$ | $6 \mathrm{pm}-12 \mathrm{am}$ |  |
| DSC | $6 \mathrm{pm}-12 \mathrm{am}$ | $6 \mathrm{pm}-12 \mathrm{am}$ | $6 \mathrm{pm}-12 \mathrm{am}$ |  |
| ESPN | $6 \mathrm{pm}-12 \mathrm{am}$ | $6 \mathrm{pm}-12 \mathrm{am}$ | $6 \mathrm{pm}-12 \mathrm{am}$ |  |
| FX | $6 \mathrm{pm}-12 \mathrm{am}$ | $6 \mathrm{pm}-12 \mathrm{am}$ | $6 \mathrm{pm}-12 \mathrm{am}$ |  |
| LIFE | $6 \mathrm{pm}-12 \mathrm{am}$ | $6 \mathrm{pm}-12 \mathrm{am}$ | $6 \mathrm{pm}-12 \mathrm{am}$ |  |
| NAN | $6 \mathrm{pm}-12 \mathrm{am}$ | $6 \mathrm{pm}-12 \mathrm{am}$ | $9 \mathrm{pm}-12 \mathrm{am}$ |  |
| TBS | $6 \mathrm{pm}-12 \mathrm{am}$ | $6 \mathrm{pm}-12 \mathrm{am}$ | $6 \mathrm{pm}-12 \mathrm{am}$ |  |
| TLC | $6 \mathrm{pm}-12 \mathrm{am}$ | $6 \mathrm{pm}-12 \mathrm{am}$ | $6 \mathrm{pm}-12 \mathrm{am}$ |  |
| TNT | $6 \mathrm{pm}-12 \mathrm{am}$ | $6 \mathrm{pm}-12 \mathrm{am}$ | $6 \mathrm{pm}-12 \mathrm{am}$ |  |
| USA | $6 \mathrm{pm}-12 \mathrm{am}$ | $6 \mathrm{pm}-12 \mathrm{am}$ | $6 \mathrm{pm}-12 \mathrm{am}$ |  |

Table S2. Total brand appearance occurrences from 2009 to 2014

| Category | 2009 | 2010 | 2011 | $2009-11$ <br> $\%$ of total | 2012 | 2013 | 2014 | $2012-14$ <br> $\%$ of total |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Food products | $\mathbf{3 , 7 7 8}$ | $\mathbf{4 , 2 7 4}$ | $\mathbf{5 , 8 3 3}$ | $\mathbf{3 1 \%}$ | $\mathbf{4 , 0 9 7}$ | $\mathbf{3 , 2 2 5}$ | $\mathbf{2 , 6 7 4}$ | $\mathbf{2 6 \%}$ |
| Savory snacks | 851 | 976 | 1,516 | $8 \%$ | 1,216 | 926 | 696 | $7 \%$ |
| Candy | 954 | 1124 | 1200 | $7 \%$ | 906 | 766 | 631 | $6 \%$ |
| Other sweets | 815 | 952 | 1031 | $6 \%$ | 816 | 671 | 571 | $5 \%$ |
| Cereal | 620 | 665 | 1118 | $5 \%$ | 633 | 459 | 411 | $4 \%$ |
| Prepared and convenience food | 295 | 264 | 519 | $2 \%$ | 283 | 261 | 237 | $2 \%$ |
| Dairy | 154 | 201 | 318 | $2 \%$ | 161 | 85 | 76 | $1 \%$ |
| Fruits and vegetables | 89 | 92 | 131 | $1 \%$ | 82 | 57 | 52 | $<.5 \%$ |
| Beverage products | $\mathbf{3 , 9 7 7}$ | $\mathbf{3 , 1 1 5}$ | $\mathbf{5 , 5 2 3}$ | $\mathbf{2 8 \%}$ | $\mathbf{7 , 0 0 6}$ | $\mathbf{5 , 4 0 2}$ | $\mathbf{4 , 1 6 3}$ | $\mathbf{4 3 \%}$ |
| Regular carbonated beverages | 1,906 | 1,545 | 2,947 | $14 \%$ | 3,919 | 2,676 | 1,854 | $22 \%$ |
| Other sugary drinks | 966 | 509 | 925 | $5 \%$ | 1268 | 928 | 783 | $8 \%$ |
| Bottled water | 330 | 399 | 621 | $3 \%$ | 768 | 754 | 759 | $6 \%$ |
| Sports and energy drinks | 343 | 321 | 644 | $3 \%$ | 746 | 614 | 445 | $5 \%$ |
| Diet soft drinks | 283 | 232 | 251 | $2 \%$ | 227 | 376 | 283 | $2 \%$ |
| 100\% Juice | 149 | 109 | 135 | $1 \%$ | 78 | 54 | 39 | $<.5 \%$ |
| Restaurants | $\mathbf{4 , 4 5 2}$ | $\mathbf{3 , 8 5 6}$ | $\mathbf{3 , 0 9 2}$ | $\mathbf{2 6 \%}$ | $\mathbf{2 , 7 1 9}$ | $\mathbf{2 , 4 5 4}$ | $\mathbf{2 , 6 3 7}$ | $\mathbf{2 0 \%}$ |
| Quickserve restaurants | 1,516 | 1,660 | 1,504 | $11 \%$ | 1,562 | 1,429 | 1,443 | $11 \%$ |
| Other restaurants | 2,936 | 2,196 | 1,588 | $15 \%$ | 1,157 | 1,025 | 1,194 | $9 \%$ |
| All other | $\mathbf{1 , 5 9 4}$ | $\mathbf{1 , 7 5 6}$ | $\mathbf{3 , 1 1 0}$ | $\mathbf{1 5 \%}$ | $\mathbf{1 , 9 2 1}$ | $\mathbf{1 , 2 6 7}$ | $\mathbf{1 , 0 1 2}$ | $\mathbf{1 1 \%}$ |
| Total | $\mathbf{1 3 , 8 0 1}$ | $\mathbf{1 3 , 0 0 1}$ | $\mathbf{1 7 , 5 5 8}$ |  | $\mathbf{1 5 , 7 4 3}$ | $\mathbf{1 2 , 3 4 8}$ | $\mathbf{1 0 , 4 8 6}$ |  |
| Soure |  |  |  |  |  |  |  |  |

Source: Nielsen 2015

