

A Profile of
Celebrities

Involved in the

**Partnership for a Healthier America's
Fruits & Veggies (FNV) Campaign**

2015-2016



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**Report submitted to the Robert Wood Johnson Foundation for the
Partnership for a Healthier America's FNV Campaign Evaluation**

January 2017



Suggested citation:

Kraak VI, Zhou M, Duffey KJ, Williams JD. *A Profile of Celebrities Involved in the Partnership for a Healthier America's Fruits & Veggies (FNV) Campaign 2015-2016*. Report submitted to the Robert Wood Johnson Foundation for the Partnership for a Healthier America's FNV Campaign Evaluation. Blacksburg, Virginia: Virginia Tech. January 2017.

Layout and design by Juan Quirarte at [QDesign](#).



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Acknowledgments

We thank Victoria Kumpuris-Brown and Laura Leviton at the Robert Wood Johnson Foundation for awarding Virginia Tech a grant to design and implement an independent evaluation of the FNV Campaign. We also thank Caitlin Simon at the Partnership for a Healthier America for providing useful information for this evaluation. We appreciate the assistance of Srijith Rajamohan, Faiz Abidi and Nicholas Polys at Virginia Tech's Advanced Research Computing to help construct and analyze the celebrity database, and design the interactive dendrograms included in this report. We are also grateful to Juan Quirarte at QDesign for completing the design, layout and figures in the final report.



Acronyms and Abbreviations

AFA	Asian Female Athlete	LMO	Latino Male Other
AFE	Asian Female Entertainer	MilkPEP	The Milk Processor Education Program
AFO	Asian Female Other	MFA	Multi-cultural Female Athlete
AMA	Asian Male Athlete	MFE	Multi-cultural Female Entertainer
AME	Asian Male Entertainer	MFO	Multi-cultural Female Other
AMO	Asian Male Other	MMA	Multi-cultural Male Athlete
ATH	Professional Athletes	MME	Multi-cultural Male Entertainer
BEV	Beverages	MMO	Multi-cultural Male Other
BFA	Black Female Athlete	NCB	No-calorie beverages
BFE	Black Female Entertainer	OFB	Other foods and beverages
BFO	Black Female Other	OTH	Other celebrities
BMA	Black Male Athlete	PHA	Partnership for a Healthier America
BME	Black Male Entertainer	QSR	Quick-service restaurant
BMO	Black Male Other	RWJF	Robert Wood Johnson Foundation
CR	Chain restaurant meals	SC	Snacks and cereals
DC	District of Columbia	SSB	Sugar-sweetened beverages
DGA	Dietary Guidelines for Americans	TCCC	The Coca-Cola Company
ENT	Professional Entertainers	TV	Television
FNV	Fruit & Veggies Campaign	US	United States
FTC	Federal Trade Commission	WFA	White Female Athlete
HFSS	High-fat, -sugar and -salt	WFE	White Female Entertainer
LCB	Low-calorie beverages	WFO	White Female Other
LFA	Latino Female Athlete	WMA	White Male Athlete
LFE	Latina Female Entertainer	WME	White Male Entertainer
LFO	Latino Female Other	WMO	White Male Other
LMA	Latino Male Athlete		



Executive Summary

A celebrity endorser is a famous person who uses public recognition or the media to promote a brand, product or service in an advertisement or other marketing communication to influence sales, use or consumption. In February 2015, the Partnership for a Healthier America (PHA) launched a branded marketing campaign to promote the sale and consumption of fruits and vegetables called FNV (Fruits & Veggies). The FNV Campaign was launched in two United States (U.S.) cities—Fresno, California and Norfolk, Virginia—to encourage racially and ethnically diverse Millennial moms (ages 21-34 years in 2015) and Generation Z teens (ages 15-20 years in 2015) to buy and eat fruits and vegetables. This report describes the demographic profile and food and beverage group, brand or product endorsements of the 82 celebrities who partnered with the FNV Campaign between April 2015 and December 2016.

The names of the celebrities associated with the FNV Campaign (n=82) were entered into a larger Excel database of celebrities (n=552) involved with food and beverage group, brand or product endorsements in the U.S. between 1990 and 2016. The database was constructed between July 2015 and December 2016. We organized the celebrity database by demographic profile characteristics (i.e., sex, age, and race or ethnicity); company partnerships; and food or beverage group, brand or product endorsements. A python-based scripting engine and other data visualization tools (i.e., scatterplots and dendrograms) were used to analyze and visually display the relationships among each celebrity, company association, and their brand or food and beverage product endorsements.

A total of 552 unique celebrities were associated with 745 endorsements representing 159 brands across 13 food and beverage categories. The FNV Campaign celebrities represented 15% of the entire database of unique celebrities across three categories (i.e., professional athletes, entertainers and other). Less than two thirds (63%; n=52) of the FNV celebrities are professional athletes; about one third (32%; n=26) are entertainers; and 5% (n=4) are public figures. About two thirds of the FNV celebrities are male (68%; n=56). The FNV celebrities are primarily white (46%; n=38) or African-American (43%; n=35). Multi-racial or multi-ethnic celebrities represented 5% (n=4); Hispanic or Latino/a represented 4% (n=3); and Asian-Americans represent 2% (n=2) of the FNV Campaign celebrities. Nearly two-thirds of the FNV celebrities (62%; n=51) are between 21-34 years of age that aligns with the Millennial age range but only 6% (n=5) are within the Generation Z teen age range.

The 82 FNV Campaign celebrities were associated with nearly a quarter (23%; n=37) of brands in the larger database (n=552) that represented healthy food and beverage products including: fruits and vegetables, low- or no-calorie beverages (LCB or NCB) less than 60 calories/12 ounce-serving; and milk or dairy. Overall, the 82 FNV Campaign celebrities were involved with 121 endorsements across 12 food and beverages categories that included: sugar-sweetened beverages (SSB), LCB, NCB, quick-service restaurants (QSR), sweet snacks, ready-to-eat cereal, milk/dairy, alcohol, water, fruits and vegetables, or other (i.e., condiments). Three quarters (76%; n=62) of the celebrities endorsed only the FNV brand; 12% (n=10) endorsed the FNV and one other brand; 10% (n=8) endorsed 2-3 other brands; and 2% (n=2) (i.e., Apolo Ohno and Serena Williams) endorsed FNV and 5-8 other brands. Of the 20 celebrities who endorsed FNV and another brand, less than a third (30%; n=6) exclusively endorsed brands associated with healthy food and beverage products. The remaining 70% (n=14) of FNV celebrities endorsed brands associated with unhealthy products high in fat, sugar and sodium that the U.S. government and public health experts recommend Americans limit to achieve a healthy diet consistent with the Dietary Guidelines for Americans 2015-2020.

Our analysis showed that the 82 celebrities who partner with FNV Campaign may potentially play an important role to raise awareness and desire among the target groups to purchase and consume fruits and vegetables. However, there is currently no empirical evidence to show that these celebrities have had any measurable influence on raising awareness or influencing the diet-related purchasing or consumption behaviors of Generation Z teens and Millennial moms in Fresno, California and Norfolk, Virginia where the campaign was launched in 2015.



Experimental research is needed to explore how target populations understand and respond to the FNV Campaign, especially within the context of the prevailing food marketing environment that promotes primarily unhealthy food and beverage products. Future research will help to build an evidence base to demonstrate whether the celebrity component of the FNV Campaign is an effective strategy to encourage Americans to purchase and consume more fruits and vegetables to support a healthy diet.

Future research should:

- Use existing theoretical frameworks and conceptual models to understand whether racially, ethnically and culturally diverse groups are able to recognize celebrities involved in the FNV Campaign, and whether they can associate the celebrities with fruits and vegetables versus other food and beverage groups, brands and product categories.
- Examine how Americans exposed to the FNV Campaign across various U.S. geographic locations view the *credibility* (i.e., trust, attractiveness and expertise) of celebrities involved in the FNV Campaign, and *congruence* or “fit” between the celebrity and target groups, as well as the celebrity and the FNV brand.
- Explore how targeted populations think about celebrities who serve as multiple endorsers for brands associated with healthy food and beverage groups (i.e., fruits and vegetables and non-fat dairy) versus energy-dense and nutrient-poor food and beverage categories (i.e., SSB, QSR meals, salty and sugary snacks and desserts).
- Compare the effectiveness of celebrity endorsement associated with the FNV Campaign across different age and ethnic/racial groups, as well as marketing and media channels (i.e., print and broadcast media; social and digital interactive media; sponsored community events; and in-store food-retail marketing).
- Assess consumers’ views about the in-store food retailer messages delivered by the FNV Campaign celebrities through posters and placards.
- Analyze the existing policy landscape to inform smarter policies and comprehensive actions that can be taken by the U.S. government, private-sector actors, and non-governmental organizations to leverage celebrity marketing to promote only brands associated with healthy food and beverage product profiles and that support healthy food environments.



Introduction

Fruit and vegetable consumption is one of many synergistic interventions required to prevent obesity and promote a healthy weight among individuals and populations.¹ People who consume an abundant amount of fruits and vegetables will reduce their risk of several diet-related chronic conditions including cardiovascular diseases, type 2 diabetes and certain types of cancer.² To support optimal health and prevent diet-related non-communicable diseases, the Dietary Guidelines for Americans (DGA) 2015-2020³ and the Healthy People 2020⁴ recommend that adults consume an average of 4.5 cup equivalents of fruits and vegetables/day for a 2,000 calorie diet. Children and teens should consume 1 to 1.5 cup equivalents of fruit and 1.5 to 2.5 cup equivalents of vegetables/day for a 1,200-1,600 calorie diet.⁴

While fruit and vegetable intake among American children and teens has improved in recent years, their intake still does not meet the minimum government recommendations.^{5,6,7,8,9} The National Fruit and Vegetable Alliance's 2015 progress report card for the United States (U.S.) documented that American's vegetable intake, which excluded fried potatoes, declined by 6 percent between 2010 and 2015.¹⁰ Only 4 percent of adults and children meet the daily target for vegetable intake and 8 percent meet the daily target for fruit intake.¹⁰ Moreover, the advertising and marketing of fruits and vegetables received an F grade (representing a failure to move toward the established target of all food marketing targeted to children, adolescents and adults to promote fruits and vegetables) for 2005-2010¹¹ and 2010-2015.¹⁰

In February 2015, the Partnership for a Healthier America (PHA) based in Washington, DC¹² launched a branded marketing campaign called FNV (Fruits & Veggies)¹³ in two test cities—Fresno, California and Norfolk, Virginia—to target racially, ethnically and culturally diverse populations with low fruit and vegetable intakes. The initial target populations were Millennial moms ages 21 to 34 years¹⁴ and Generation Z teens that overlap with the youngest Millennials ages 15 to 20 years.^{15,16}

The FNV Campaign uses creative commercial and behavioral branding principles and strategies of integrated marketing communications including: edgy advertising messages; *pro bono* celebrity endorsement; interactive social media; print and broadcast media; sponsored community events; and in-store food-retail marketing to make fruits and vegetables attractive and “cool” to increase sales and consumption among targeted populations. According to the PHA, the FNV logo is intended to be used to support the promotion of fruits and vegetables that do not contain added sugars or sweeteners, fat or sodium. Partners who agree to be involved in the FNV Campaign have permission to use the FNV brand only with prior PHA approval. The PHA requests that partners use the FNV logo, taglines, or messages in a positive and non-comparative way among different types of fruits and vegetables. Examples include: “*Proud supporter of FNV*” or “*We're on Team FNV.*” Moreover, PHA indicates that it plans to use the FNV brand to highlight all forms of fruits and vegetables (i.e., fresh, frozen, canned and dried) in generic non-branded forms only.

Between 2015 and 2016, the FNV Campaign was promoted through diverse social media such as: Instagram and twitter (@teamFNV or #teamFNV), Facebook (/TeamFNV), Tumbler (blog.fnv.com) and YouTube. By June 2016, the PHA reported that the FNV Campaign had delivered more than 350 million impressions on social media, 650 million impressions through earned media, and recruited more than 80 celebrities who donated their images and time *pro bono* to the campaign.¹⁷

In October 2016, the PHA announced the expansion of the FNV Campaign to cities across 13 U.S. states including: Fresno, Los Angeles and San Francisco, California; Boise, Idaho; Dallas, Texas; Chicago, Illinois; Mason City, Iowa; Syracuse, New York; Washington, DC; Boston and Springfield, Massachusetts; Norfolk, Virginia; Raleigh, North Carolina; Atlanta, Georgia; Miami, Florida; and



Wisconsin. By December 2016, the PHA reported that the FNV Campaign was supported by 20 public- and private-sector partners.^{18*}

This is one of several reports that comprise an independent evaluation of the FNV Campaign conducted by a Virginia Tech research team between September 2015 and August 2017, and funded by the Robert Wood Johnson Foundation (RWJF).

This report has four objectives:

- 1) Define relevant marketing terms and briefly summarize the published literature regarding how celebrity endorsement is used to influence the decisions and behaviors of individuals.
- 2) Examine the available evidence for the use of celebrity endorsement of food and beverage groups, brands and products and the nutritional quality of products targeted to American children, adolescents and adults.
- 3) Describe the demographic profile and brand or product endorsements of the 82 celebrities involved in the FNV Campaign.
- 4) Offer future research recommendations to provide the necessary empirical evidence to show whether the celebrity endorsement component of the FNV Campaign is effective to encourage targeted populations to purchase and consume fruits and vegetables to promote a healthy diet consistent with the DGA 2015-2020.

Background on celebrity marketing and endorsement

A *celebrity endorser* is a famous person who uses public recognition or the media to promote a brand, product or service in an advertisement or other marketing communication to influence sales, use or consumption.¹⁹ Celebrity endorsement started in the U.S. with testimonial advertisements during the 1920s and became more popular from the 1980s to the present due to evolving business norms, a growing celebrity-brokering industry and celebrity culture, and a permissive government de-regulatory agenda.²⁰ Celebrity endorsers can be a powerful influence on children and adolescents who seek aspirational role models who they want to emulate.²¹ In 2011, 13- to 17-year-old American teens were surveyed about the persons whom they admire the most as role models. The results showed that 6 percent of the teens identified entertainers (including musicians and actors) as role models, and 5 percent of the teens identified professional athletes as role models.²²

Celebrity marketing includes the company fees paid to celebrity endorsers and the cost of marketing products.²³ Celebrity marketing is a global billion-dollar business that involves entertainers, professional athletes, chefs, politicians, public figures and business entrepreneurs. Celebrity marketing is used across print, broadcast, digital and mobile media to persuade young people and adults to purchase and consume branded products.²⁴

* As of December 2016, the current FNV Campaign partners include: Avocados from Mexico, Anthem BlueCross BlueShield, BlueCross BlueShield of North Carolina, Bolthouse Farms, Farm Fresh, Green City Growers, Hidden Valley, Healthtide, The Honest Company, Kaiser Permanente, Lamar, Mars Food, Ocean Spray, Produce for Better Health Foundation, Produce Marketing Association, Robert Wood Johnson Foundation, Spartan, Sweetgreen, Trinity Health, and University of Wisconsin-Extension.

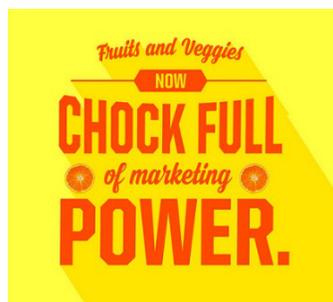


A *brand* is a proprietary visual, emotional and cultural image associated with a company, organization or product. Branding represents a name or symbol that legally identifies a company, organization, product or service to help consumers differentiate it among marketplace competitors,²⁵ and is the total experience that customers have with a business or organization. A brand is neither inherently healthy nor unhealthy. Rather, it is the nutrient profile of the food or beverage group or product category that will determine whether a branded product meets healthy or unhealthy guidelines consistent with expert and government dietary recommendations such as the DGA 2015-2020.



Several distinct biological, psychological and social mechanisms are used to explain how celebrity endorsement influences people's cognitive (e.g., attitudes and preferences) and behavioral (e.g., dietary choice and consumption) outcomes.²⁶ Neuroscience research suggests that the risk and reward decision-making center of the adolescent brain is not fully developed until the age of 25 years.²⁷ Therefore, adolescents and young adults may be vulnerable to immersive digital and interactive media used by food, beverage, restaurant and entertainment companies, and their celebrity partners, that serve to build brand awareness and loyalty for high-fat, -sugar and -sodium (HFSS) food and beverage products that may undermine a healthy diet.²⁸ There is limited evidence to suggest that the use of celebrity endorsement to promote healthy food and beverage products through social media will be effective to influence the behaviors of the target populations given the current marketing and media environment.

Marketing research suggest that businesses seek to partner with celebrities based on their *credibility* (measured by trust, attractiveness and expertise) and *congruence* (representing the "fit" between a celebrity and a target group, and between the celebrity and a specific brand), with the goal of maximizing revenue and brand equity for companies and celebrities.²⁹ A single brand may use multiple celebrity endorsers in advertisements or creative marketing to appeal to many types of customers, and a single celebrity may also endorse multiple brands. Nielsen marketing research suggests that Generation Z (ages 15-20 years; born 1995-2005) and Millennial (ages 21-34 years; born 1981 to 1994) audiences trust celebrities more than older generations including: Generation X (ages 35-49 years; born 1966-1980), Baby Boomers (ages 50-64 years; born 1951-1965) and those older than 65 years (born 1950 or earlier).³⁰



U.S. celebrity marketing of food and beverage groups and branded products

The Federal Trade Commission (FTC) released a report in 2012 that documented the 2009 food marketing expenditures of 48 food, beverage, restaurant and entertainment companies used to target U.S. children and adolescents. The FTC report found that celebrity marketing represented about \$105 million U.S. dollars in 2009, of which \$28 million was used to target children, ages 2-11 years, and \$77 million were used to target adolescents, ages 12-17 years.²³ Celebrity marketing accounted for 5.6 percent of the combined child- and teen-directed food and beverage marketing in 2009 compared to 1.3 percent in 2006.²³

Although no specific celebrities were identified in the FTC report, the celebrity marketing expenditures that targeted children were used to market the following product categories: dairy (\$14 million), prepared foods and meals (\$6.9 million), snack foods (\$3.9 million), quick-service restaurant (QSR) meals (\$1 million) and breakfast cereals (< \$1 million).²³ The \$77 million celebrity marketing dollars used to target adolescents were used to promote primarily branded HFSS food and beverage products including: carbonated beverages (\$23.8 million), milk/dairy products (\$22.2 million), snack foods (\$14.4 million), restaurant foods (\$7 million), juice and non-carbonated beverages (\$6.2 million), candy/frozen desserts (\$1.6 million) and breakfast cereals (< \$1 million).²³

A 2010 study of 100 professional athletes found that more than three quarters of 62 brands endorsed were HFSS food products and about 90 percent of 46 brands endorsed were sugar-sweetened beverages (SSB).³¹ A separate study of 65 music entertainment celebrities revealed that they were associated with 57 food and beverage brand endorsements owned by 38 different companies. Nearly three quarters (n=49) of the advertising with the entertainment celebrities promoted SSB brands and 81 percent (n=21) promote branded HFSS food products.³²



Methods

This section describes the analysis of a database constructed to elucidate the demographic profile and brand or product endorsements of the FNV Campaign celebrities. The PHA provided the Virginia Tech research team with a list of 83 celebrities who partnered with the FNV Campaign through social media, sponsored events, and in-store food retail venues between May 2015 and December 2016. A subset of these celebrities (n=54) are listed on the PHA's website.³¹ We excluded the Pomeranian dog Jiff Pom because our analysis was limited to living human celebrities. Therefore, 82 celebrities were included in the analysis.

We entered the FNV celebrity names into a larger Excel database of U.S. celebrities (n=552) that was compiled between July 2015 and December 2016, which was part of a research project independent of the FNV Campaign evaluation, in order to map and understand celebrity endorsement relationships between food and beverage product categories and brands. Details of the interdisciplinary research approach used to map the U.S. celebrity endorsement of food and beverage products for the larger database is reported elsewhere.³⁴

We established search criteria to examine the available evidence from peer-reviewed publications, gray literature, media releases, and iterative Internet searches between 1990 and 2016 to identify living celebrities who are currently or have previously been associated with the endorsement of food and beverage groups, brands or products in the U.S. We constructed and organized the Excel database by celebrity profile (i.e., sex, age, race or ethnicity); company, and brand endorsements. Each celebrity entry in the database was associated with a weblink that verified a visual or descriptive association between the celebrity and a specific food or beverage brand, product or category.

Data visualization provides a frame of reference to help people understand data in the form of abstract numbers or names. Data visualization is a method used to reduce a lot of data into an intuitive and easily comprehended graphic. We used a python-based scripting engine and other data visualization tools to analyze and visually display the relationships among each FNV Campaign celebrity, his/her association with a company or organization, and the brand or product category endorsements.

A scatterplot diagram was the first visualization tool used to illustrate the specific food and beverage product category endorsements for each of the 82 FNV Campaign celebrities by number of endorsements (i.e., 1 to more than 5) and the healthy versus unhealthy nutritional profile of the food and beverage brands, products or groups. A tree diagram or dendrogram was the second visualization tool used to illustrate the relationship between variables based on hierarchical clustering. The dendrograms were developed using the JavaScript library D3 visualization technique, presented in a portable file format, which can be viewed on most web browsers to eliminate the need for proprietary software to visualize the data. We generated two interactive dendrograms to represent the entire endorsement relationships for the 82 FNV Campaign celebrities.



Results

The analysis revealed that 552 unique celebrities were associated with 745 endorsements representing 159 brands across 13 food and beverage categories. More than two thirds (67%; n=97) of the brands endorsed by the celebrities in the larger Excel database represented HFSS food and beverage products such as alcohol, SSB with more than 60 calories per 12-ounce serving, QSR meals, and salty or sweet snacks and candy. Nearly a quarter (23%; n=37) of the brands represented healthy food and beverage products such as low-calorie beverages (LCB) providing less than 60 calories per 12-ounce serving, no-calorie beverages (NCB) providing 0 calories per 12-ounce serving, branded or unbranded water, milk/dairy products, and fruits or vegetables. Only 8% (n=13) of the brands fell in the “other” category.

Figure 1 shows that the FNV Campaign falls into the 23% of the healthy food and beverage groups or product categories. **Figure 2** compares the 82 FNV Campaign celebrity endorsements with the entire database of unique celebrities (n=552).

Figure 1: Celebrity endorsement by food and beverage categories and brands

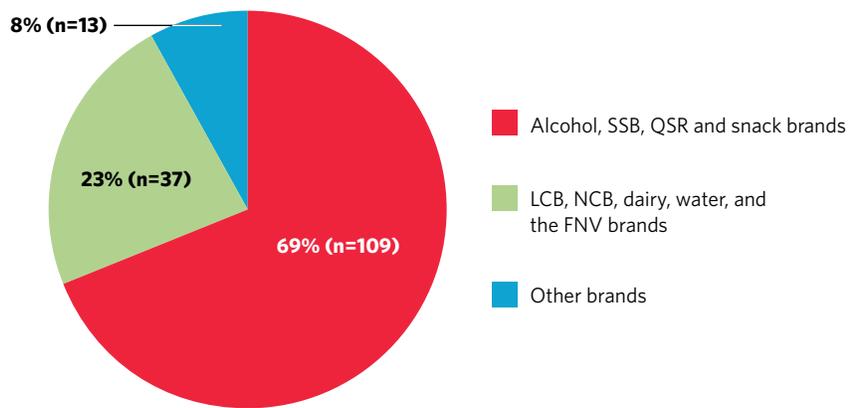


Figure 2: Celebrity endorsement for the FNV brand versus other brands

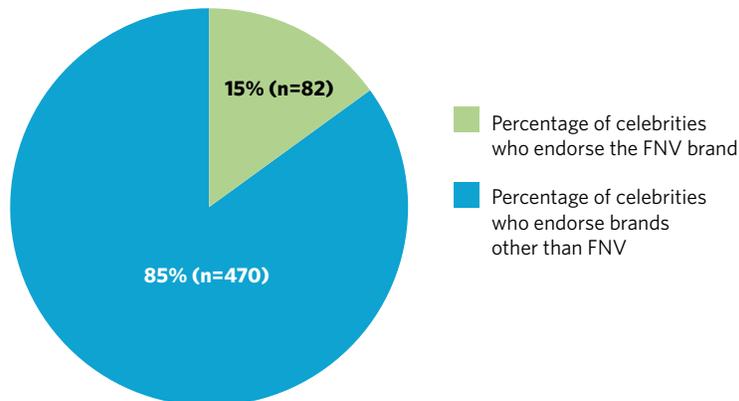


Figure 3 shows the three categories (i.e., professional athletes, entertainers and other) used to classify the FNV Campaign celebrities. Nearly two thirds (63%, n=52) of the FNV Campaign celebrities are professional athletes who represent baseball, basketball, football, ice hockey, lacrosse, running, skating, soccer, swimming and tennis. About one third (32%; n=26) of the FNV Campaign celebrities are entertainers who represent musicians, television (TV) or movie actors, and Internet personalities. The other category represents celebrity chefs, politicians, business entrepreneurs, and public figures. The remaining 5% (n=4) of the FNV Campaign celebrities in the other category include: First Lady Michelle Obama, Senator Cory Booker, Miss America 2016 Betty Cantrell, and former U.S. Army officer Mark Hertling.

Figure 3: FNV celebrities by celebrity category

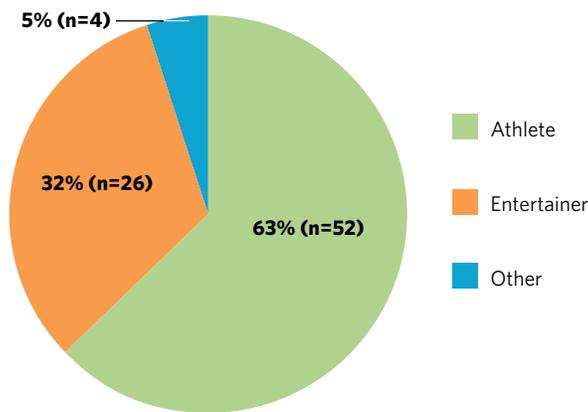


Figure 4 shows that more than two thirds (68%; n=56) of the FNV Campaign celebrities are male while about one third (32%; n=26) are female.

Figure 4: FNV celebrities by sex (male vs. female)

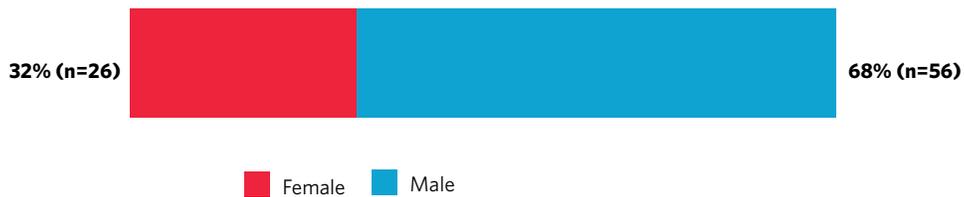


Figure 5 illustrates the race or ethnicity of the FNV Campaign celebrities. White celebrities represent 46% (n=38) and black or African-American celebrities represent 43% (n=35) of the 82 FNV celebrities. Multi-racial celebrities represent 5% (n=4) including: Jessica Alba, Victor Cruz, Colin Kaepernick and Christen Press. Hispanic or Latino/a celebrities represent 4% (n=3) including: Marie Garcia, Andrea Navedo and Sergio Romo. Asian-American celebrities represent 2% (n=2) of the FNV Campaign celebrities with professional athletes Michelle Kwan and Apolo Anton Ohno.

Figure 5: FNV celebrities by race or ethnicity

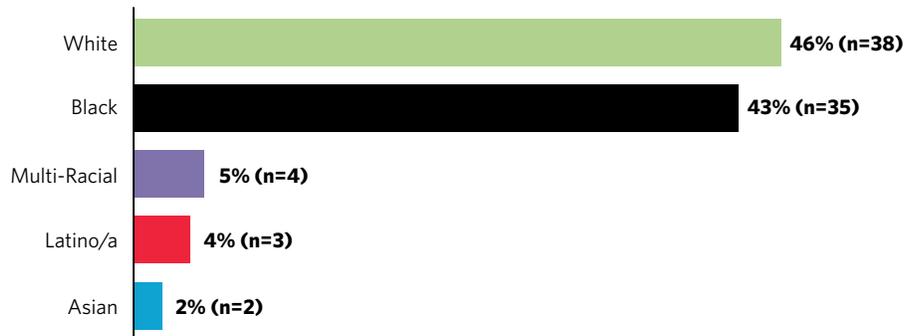


Figure 6 shows that nearly two thirds (62%; n=51) of the FNV Campaign celebrities are between the ages of 21 and 34 years, which aligns with the age range of Millennials (one of the two target populations of the FNV Campaign) in Norfolk, Virginia and Fresno, California. About a quarter of the celebrities (27%) are Gen Xers who are between the ages of 35 and 49 years, and 6% of the FNV celebrities are Baby Boomers ages 50-64 years. Only 6% (n=5) of the celebrities represent Generation Z teens between the ages of 15 and 20 years, which is the other target population of the FNV Campaign in Norfolk, Virginia and Fresno, California. The Generation Z celebrities include: Madison Beer, brothers Hayes and Nash Grier, and Ross Lynch and Rocky Lynch (two of the “R5” musicians). There are no celebrities in the Silent Generation category. It should be noted that the ages of the celebrities in the Excel database were collected in 2015. Therefore, some discrepancies may exist between the age information shown in our analysis and the newly updated information from the Internet.

Figure 6: FNV celebrities by age

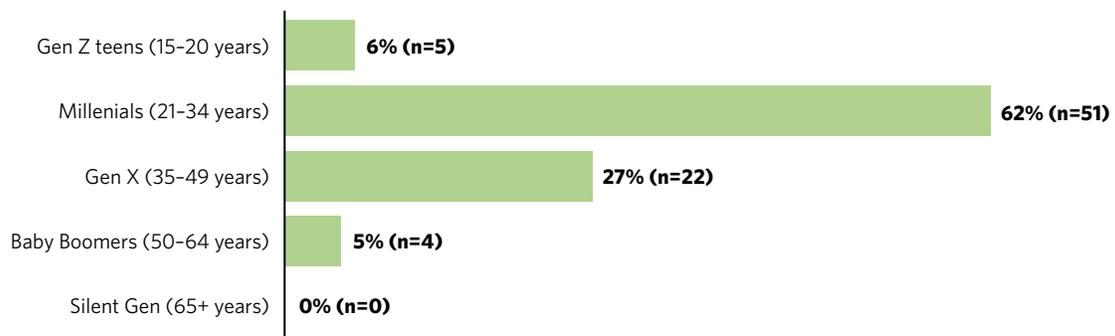


Figure 7 shows that of the 82 celebrities who partner with the FNV Campaign, three quarters (76%; n=62) endorse only the FNV brand. A total of 12% (n=10) of the FNV celebrities (i.e., Shanti Douglas, Jordin Sparks, Gabrielle Union, Rob Gronkowski, Colin Kaepernick, Hunter Pence, Paul Rabil, Darrelle Revis, Sergio Romo, and Michelle Obama) endorse both the FNV and one other brand. A total of 10% (n=8) FNV celebrities (i.e., Jessica Alba, Cindy Crawford, Julianne Hough, John Cena, Victor Cruz, Stephen Curry, Michelle Kwan, and Cam Newton) endorse the FNV and two to three other brands. Two celebrities (2%) (i.e., Serena Williams and Apolo Ohno) are “super endorsers” who are associated with four to seven other brands aside from the FNV brand.

Figure 7: FNV celebrities by the number of brand endorsements

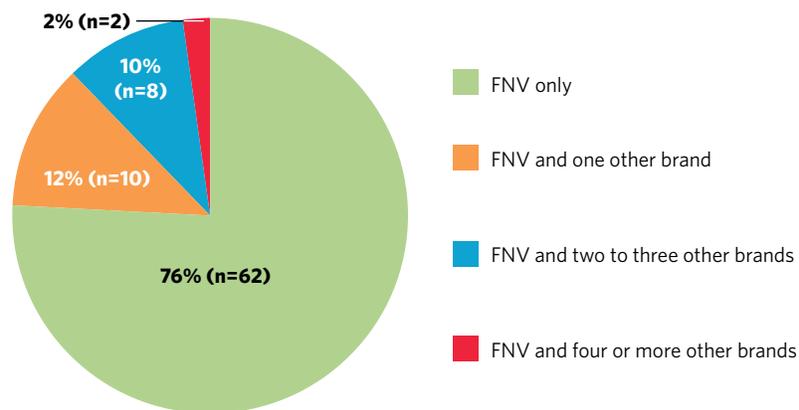


Figure 8 shows that among the 20 celebrities who endorse the FNV and other brands, only one third (30%; n=6) endorse brands that represent healthy food and beverage products. These celebrities include: Michelle Obama, Jessica Alba, Darrelle Revis, Sergio Romo, Jordin Sparks, and Ashanti Douglas. The remaining 70% (n=14) of FNV celebrities who endorse multiple brands are a combination of healthy and unhealthy HFSS food and beverage products.

Figure 8: Celebrities who endorse brands other than FNV

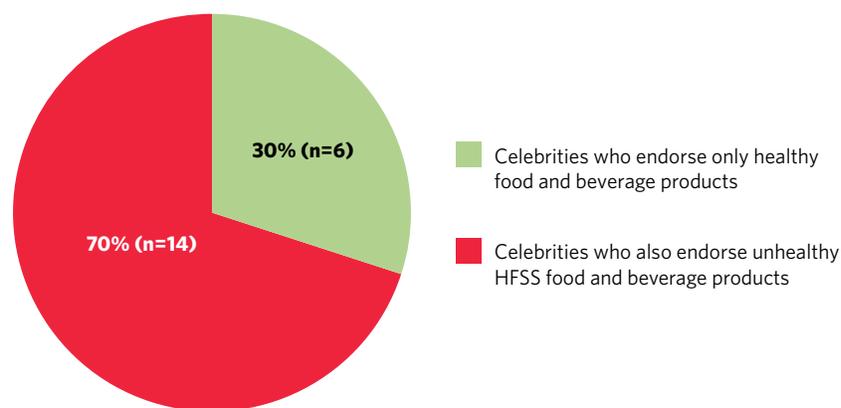


Figure 9 shows that the 82 FNV celebrities are involved with 121 endorsements across 12 food and beverages categories. Fruits and vegetables comprise 68 percent of the endorsements (excluded from the figure to highlight the other endorsements). Of the remaining 32 percent of endorsements across 11 food and beverage categories, the FNV celebrities endorsed SSB, LCB, NCB, QSR, sweet snacks, ready-to-eat cereal, milk/dairy, alcohol, water and other such as condiments. The largest category endorsed was SSB (8%; n=10) followed by milk/dairy (7%; n=9) and QSR (5%; n=6). No FNV celebrities endorsed the salty snack category.

Figure 9: FNV celebrities' food and beverage category endorsements

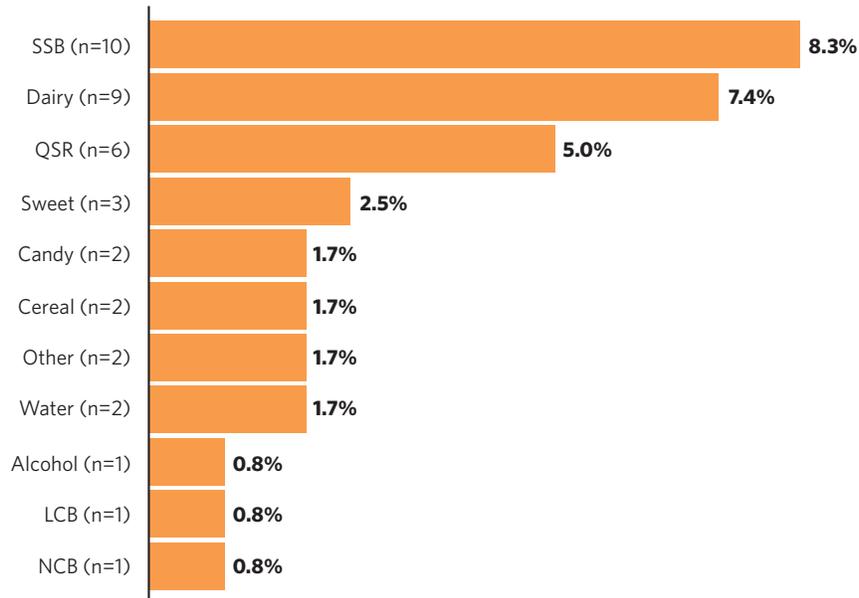
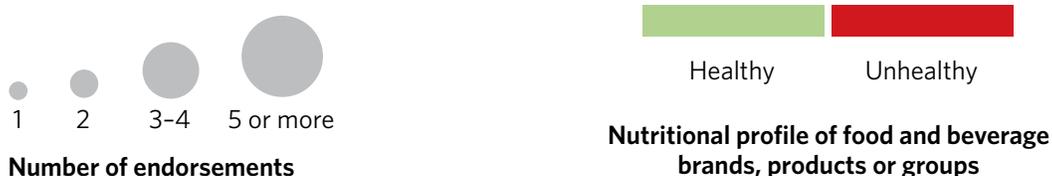


Figure 10 uses a scatterplot diagram to illustrate the specific food and beverage product category endorsements for each of the 82 FNV celebrities on pages 16-22. The different bubble sizes represent the number of brand or product endorsements. Green represents healthy food and beverage products while red represents unhealthy HFSS food and beverage products.

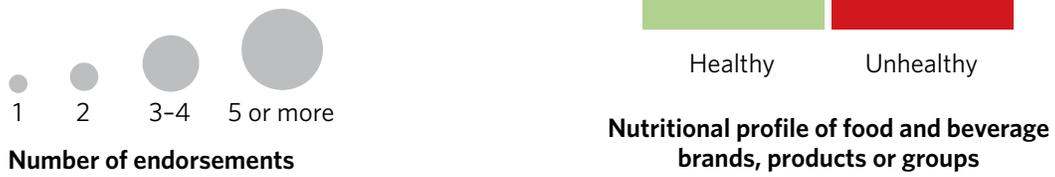
Figure 10: FNV celebrity endorsements by category and the nutritional profile of food and beverage brands, products or groups



Celebrity	Name Category	SSB	LCB	NCB	Water	Alcohol	Candy	Sweet	Salty	Cereal	Dairy	FNV	QSR	Others	Total # Endorsements
	Jessica Alba Entertainer		●								●	●			●
	Danny Amendola Athlete											●			●
	Madison Beer Entertainer											●			●
	Kristen Bell Entertainer											●			●
	Cory Booker Politician											●			●
	Wayne Brady Entertainer											●			●
	Betty Cantrell Miss America											●			●
	John Cena Athlete	●								●		●			●
	Kam Chancellor Athlete											●			●
	Brandi Chastain Athlete											●			●



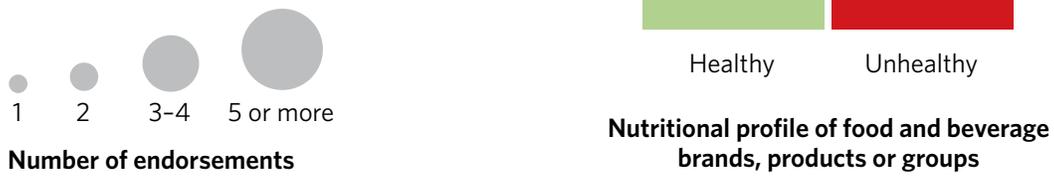
Figure 10 (continued): FNV celebrity endorsements by category and the nutritional profile of food and beverage brands, products or groups



Celebrity	Name Category	SSB	LCB	NCB	Water	Alcohol	Candy	Sweet	Salty	Cereal	Dairy	FNV	QSR	Others	Total # Endorsements
	Ha Ha Clinton-Dix Athlete											●			●
	Jamie Collins Athlete	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Jason Collins Athlete											●			●
	Marques Colston Athlete	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	A. J. Cook Entertainer											●			●
	Cindy Crawford Entertainer	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Victor Cruz Athlete	●								●		●	●		●
	Stephen Curry Athlete	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Tom Dolan Athlete											●			●
	Julian Edelman Athlete	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Briana Evigan Entertainer											●			●



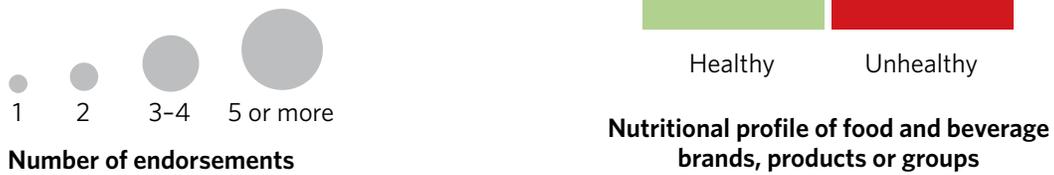
Figure 10 (continued): FNV celebrity endorsements by category and the nutritional profile of food and beverage brands, products or groups



Celebrity	Name Category	SSB	LCB	NCB	Water	Alcohol	Candy	Sweet	Salty	Cereal	Dairy	FNV	QSR	Others	Total # Endorsements
	Allyson Felix <i>Athlete</i>											●			●
	Brandon Flowers <i>Entertainer</i>											●			●
	Jeff Green <i>Athlete</i>											●			●
	Hayes Grier Nash Grier <i>Entertainer</i>											●			●
	Rob Gronkowski <i>Athlete</i>											●	●		●
	General Mark Hertling <i>Politician</i>											●			●
	Julianne Hough <i>Entertainer</i>						●				●	●			●
	Randy Jackson <i>Entertainer</i>											●			●
	Nick Jonas <i>Entertainer</i>											●			●
	Colin Kaepernick <i>Athlete</i>											●	●		●
	Duncan Keith <i>Athlete</i>											●			●



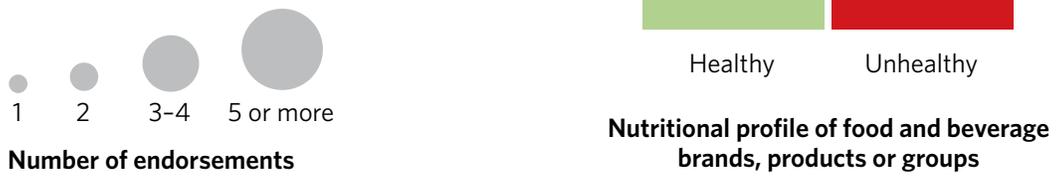
Figure 10 (continued): FNV celebrity endorsements by category and the nutritional profile of food and beverage brands, products or groups



Celebrity	Name Category	SSB	LCB	NCB	Water	Alcohol	Candy	Sweet	Salty	Cereal	Dairy	FNV	QSR	Others	Total # Endorsements
	Meghan Kligenberg <i>Athlete</i>											●			●
	Michelle Kwan <i>Athlete</i>	●									●	●			
	Brandon LaFell <i>Athlete</i>											●			●
	Charles C. Mann <i>Athlete</i>											●			●
	EJ Manuel <i>Athlete</i>											●			●
	Jessica Garcia <i>Entertainer</i>											●			●
	Wesley Matthews <i>Athlete</i>											●			●
	Devin McCourty <i>Athlete</i>											●			●
	Alonzo Mourning <i>Athlete</i>											●			●
	Tia Mowry <i>Entertainer</i>											●			●
	Andy Murray <i>Athlete</i>											●			●



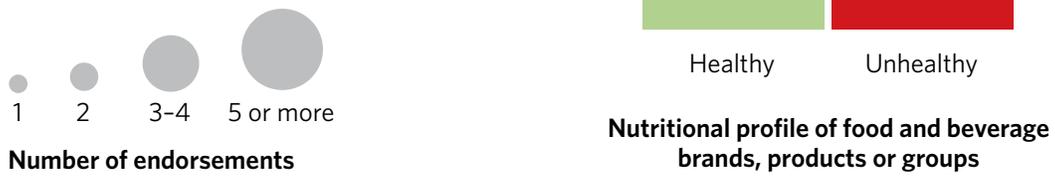
Figure 10 (continued): FNV celebrity endorsements by category and the nutritional profile of food and beverage brands, products or groups



Celebrity	Name Category	SSB	LCB	NCB	Water	Alcohol	Candy	Sweet	Salty	Cereal	Dairy	FNV	QSR	Others	Total # Endorsements
	Andrea Navedo <i>Entertainer</i>											●			●
	Cam Newton <i>Athlete</i>	●									●	●			
	Rob Ninkovich <i>Athlete</i>											●			●
	Kyle O'Quinn <i>Athlete</i>											●			●
	Michelle Obama <i>Politician</i>				●							●			●
	Apolo Ohno <i>Athlete</i>	●						●			●	●	●		
	Ben Olsen <i>Athlete</i>											●			●
	Hunter Pence <i>Athlete</i>											●	●		
	Chris Pontius <i>Entertainer</i>											●			●
	Buster Posey <i>Athlete</i>											●			●
	Christen Press <i>Athlete</i>											●			●



Figure 10 (continued): FNV celebrity endorsements by category and the nutritional profile of food and beverage brands, products or groups



Celebrity	Name Category	SSB	LCB	NCB	Water	Alcohol	Candy	Sweet	Salty	Cereal	Dairy	FNV	QSR	Others	Total # Endorsements
	Paul Rabil Athlete	●										●			●
	Christie Rampone Athlete											●			●
	Megan Rapinoe Athlete											●			●
	Trovon Reed Athlete											●			●
	Darrelle Revis Athlete			●								●			●
	Sergio Romo Athlete										●	●			●
	Briana Scurry Athlete											●			●
	Brent Seabrook Athlete											●			●
	Torrey Smith Athlete											●			●
	Steve Smith Athlete											●			●
	Tye Smith Athlete											●			●
	Jordin Sparks Entertainer				●							●			●



Figure 10 (continued): FNV celebrity endorsements by category and the nutritional profile of food and beverage brands, products or groups



Celebrity	Name Category	SSB	LCB	NCB	Water	Alcohol	Candy	Sweet	Salty	Cereal	Dairy	FNV	QSR	Others	Total # Endorsements
	Tyrod Taylor Athlete											●			●
	Jonathan Toews Athlete	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Gabrielle Union Entertainer					●						●			●
	BW Webb Athlete	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Briante Weber Athlete											●			●
	Ryan Wendell Athlete	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Serena Williams Athlete	●					●	●			●	●	●		●
	R5 Entertainer											●			●
	Mick Batyske Entertainer											●			●
	Estelle Swaray Entertainer	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Ashanti Douglas Entertainer				●							●			●



Figure 11 that appears on the next two pages illustrates the data from Figure 10 across the three celebrity categories as of December 2016. Celebrities listed on the left-hand side of the figure with the blue background (n=26) are entertainers (i.e., musicians, TV or movie actors, or Internet stars). Celebrities listed on the right-hand side of the figure with the violet background (n=52) are professional athletes. Celebrities listed on the top with the maroon background represent celebrities in the other category. The size of the picture represents the number of endorsement. The color of the pictures shows the healthfulness of the food and beverage products endorsed. Healthy food and beverage product endorsements are green, and unhealthy HFSS food and beverage products are red. The icon next to each celebrity's name represents his/her profession.

Legend for Figure 11

Number of endorsements for the celebrities associated with the PHA's FNV Campaign

-  1 FNV only endorsement
-  2 FNV and 1 other brand endorsement
-  3-4 FNV and 2 to 3 other brands
-  5-8 FNV and 4 or more other brands

Healthy food and beverage product endorsements are at the green end and unhealthy food and beverage product endorsements are at the red end



Celebrity Categories

-  Football
-  Soccer
-  Hockey
-  Skating
-  Wrestling
-  Lacrosse
-  Basketball
-  Baseball
-  Swimming
-  Tennis
-  Running
-  Actor
-  Politician
-  Beauty Queen
-  Singer/Musician
-  Internet Star



Figure 11: Celebrities Associated with the U.S. Partnership for a Healthier America's Fruits & Veggies (FNV) Campaign

Entertainers (26)



Public Figures (4)



Athletes (52)



Figure 12: Pyramid image of brand endorsements of the FNV Campaign celebrities

Figure 12 shows details about the brands endorsed by the 82 FNV Campaign celebrities. The green section at the bottom of the pyramid are the celebrities who only endorse the FNV brand. The orange section represents FNV celebrities who endorse one additional brand aside from FNV. The purple section represents FNV celebrities who endorse two to three other brands aside from FNV. The top of the pyramid with the blue background shows the brand endorsements of FNV celebrities and professional athletes, Serena Williams and Apolo Ohno, who endorsed more than five brands.



Figure 13 interactive dendrogram emphasizes the endorsement relationships between the FNV celebrities and food or beverage categories or brands.

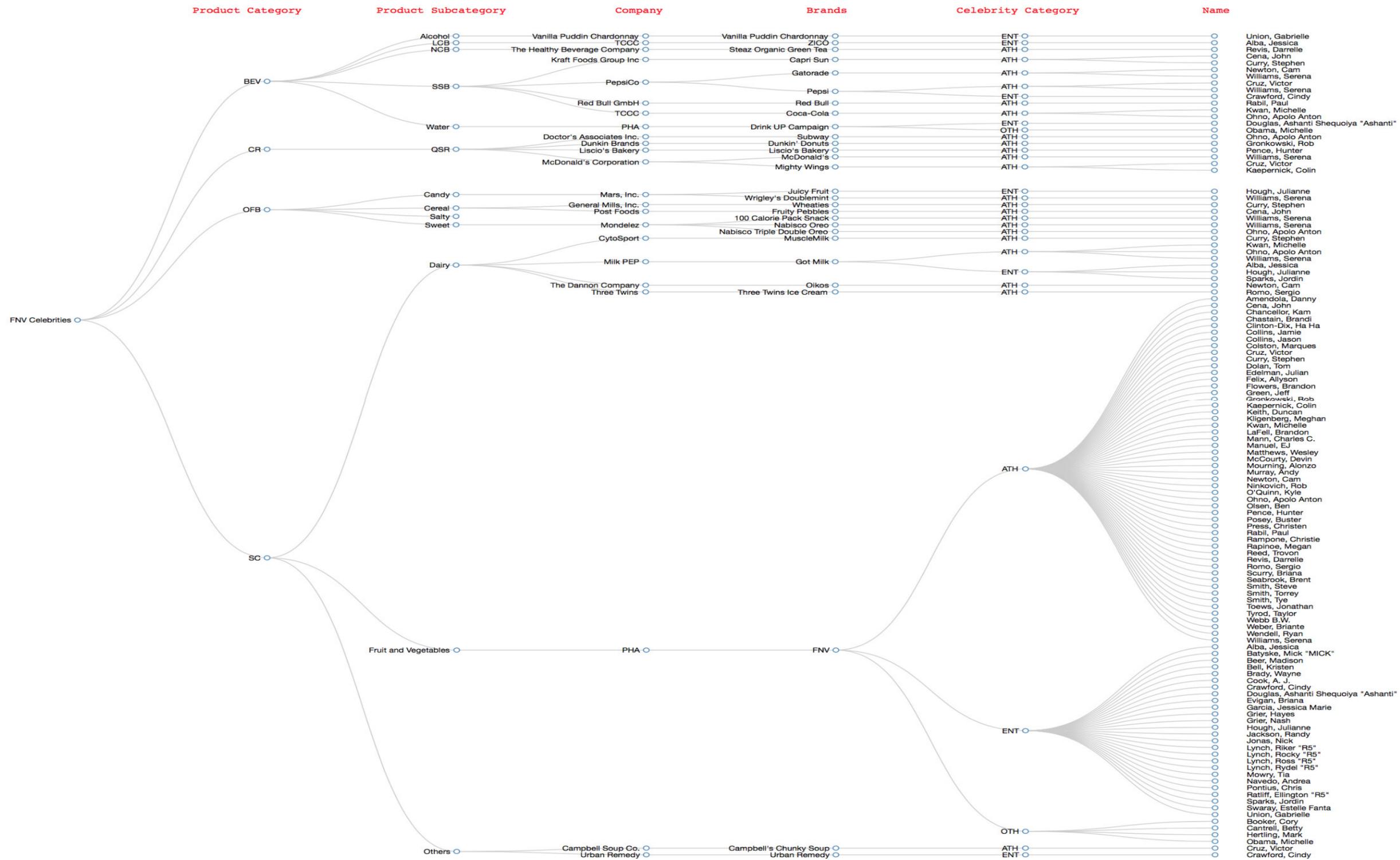
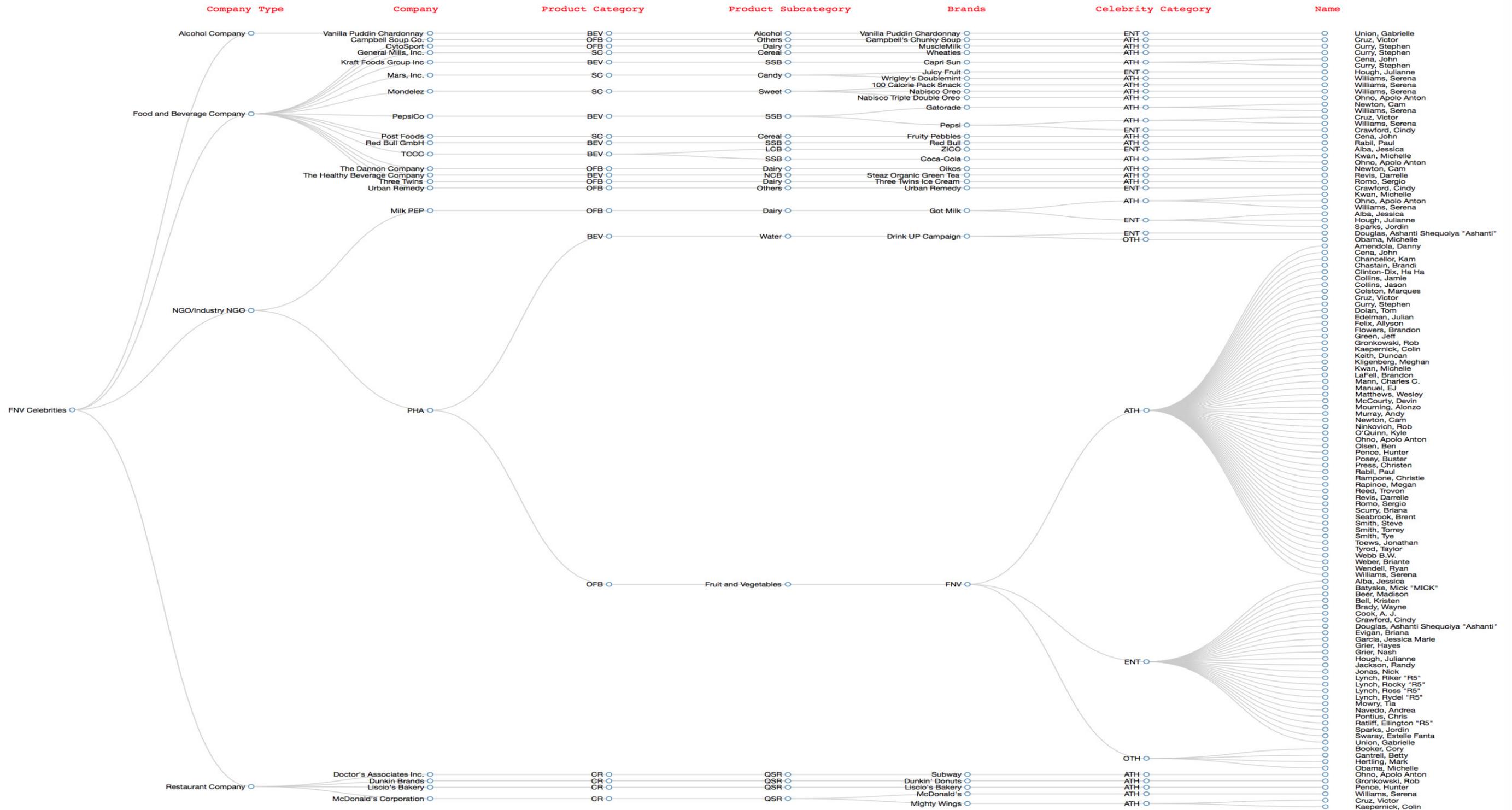


Figure 14 interactive dendrogram shows the endorsement relationship between celebrities and the various food, beverage or restaurant companies.



Discussion

Our analysis showed that the 82 celebrities who partner with FNV Campaign may potentially play an important role to raise awareness and desire among the target groups to purchase and consume fruits and vegetables. However, there is currently no empirical evidence to show that these celebrities have had any measurable influence on raising awareness or influencing the diet-related purchasing or consumption behaviors of Generation Z teens and Millennial moms in Fresno, California and Norfolk, Virginia where the campaign was launched in 2015. We discuss the significance of the findings of our analysis below to inform the PHA's use of celebrities in the FNV Campaign as it expands nationwide.

Unlike large companies, the PHA does not pay celebrities for their association with the FNV brand or promotion of the FNV Campaign. The celebrity involvement and use of their image is *pro bono* (donated). However, there may be some disadvantages to celebrities involved in *pro bono* campaigns versus their concurrent involvement in commercially funded advertising and marketing campaigns. The financial details of celebrity partnerships with or sponsorship by food, beverage, restaurant and entertainment companies are often proprietary and not available to the public. Yet certain high-profile partnerships have been reported through the media, which suggest that companies will pay generous amounts of money to secure professional athletes and entertainment celebrities as spokespersons for their corporate brands to engage in targeted or multi-cultural marketing that could diminish the impact of the same celebrity's involvement in a *pro bono* health promotion or social marketing campaign.

For instance, PepsiCo has signed lucrative contracts to influence the preferences and purchases of African Americans, such as the \$5 million dollar contract with Michael Jackson during the 1980s²⁰ and a \$50 million dollar, multi-year contract with the music entertainer Beyonce Knowles, both of whom promoted the full-calorie Pepsi cola brand.³⁵

In 2010, the professional basketball athlete, LeBron James, who has endorsed six food and beverage brands (i.e., *Sprite*, *Powerade* and *Vitaminwater* [The Coca-Cola Company]; *Dunkin' Donuts*, *McDonald's* Corporation, and *Bubblicious* [Cadbury Schweppes])³⁴ and other non-food brands, earned greater than seven times his salary and game winnings combined from these endorsements alone.³⁶

The Coca-Cola Company launched a new global brand campaign in 2016 to replace Open Happiness called Taste the Feeling that included a fresh visual identity, an interactive digital experience, signature songs, and ten 60-second television commercials that united all of the Coca-Cola sub-brands (e.g., *Coke Life*, *Coke Zero* and *Diet Coke*) under one global campaign.³⁷ This new campaign complemented other existing company campaigns (e.g., *Share a Coke* and *a Song*) that integrates music, entertainment, the corporate brand and/or product, and celebrity endorsement, such as the musical entertainer, Selena Gomez, to reach a multi-cultural and Latino/a audience in the U.S. and worldwide.³⁸

The FTC 2012 report confirmed that celebrity endorsement has been used primarily to promote energy-dense and nutrient-poor food and beverage products to young people in the U.S. marketplace.²³ The beverage industry spent \$23.8 million dollars to market carbonated SSB and the restaurant industry spent \$7 million dollars to target adolescents in 2009.²³ Our analysis of the U.S. database of 552 celebrities showed that the FNV celebrities represented only a quarter of healthy food groups, whereas the remaining three quarters were endorsements for full-calorie SSB, QSR, salty or sweet snacks, and candy.

It is notable that three quarters (76%) of the FNV celebrities endorsed only the FNV brand, which suggests that the PHA has taken great care in partnering with celebrities who cultivate a healthy image. Of the remaining quarter (24%; n=20) of celebrities who endorsed both FNV and another brand, less than a third (30%; n=6) exclusively endorsed brands associated with healthy food and beverage products. The remaining 70% (n=14) of FNV celebrities endorsed brands associated with healthy and



unhealthy HFSS products that the U.S. government and public health experts recommend Americans limit to achieve a healthy diet consistent with the DGA 2015-2020.³

Most notable are Serena Williams who has endorsed eight corporate brands and product categories (i.e., *Mighty Wings*, *McDonald's*, *Gatorade* and *Pepsi* [PepsiCo]; *Oreos* and *Wheat Thins* [Mondelez]; *Wrigley's Doublemint gum* [Mars, Inc]; and *Got Milk?* [MilkPEP]). Apolo Ohno has endorsed five corporate brands and product categories (i.e., *Subway*, *Oreos* [Mondelez], *Coke* [The Coca-Cola Company] and *Got Milk?* [MilkPEP]). Other potentially concerning multi-endorsers associated with the FNV Campaign include: Gabriel Union, who has endorsed the alcohol brand, *Vanilla Pudding chardonnay wine*; and John Cena (i.e., *Capri Sun* [Kraft Foods] and *Fruity Pebbles cereal* [Post Foods]).

Nearly two thirds of the FNV celebrities are professional athletes (63%) and more than two thirds are men (68%). Young people may view athletes as role models because physical activity and fitness are important components of a healthy lifestyle. However, it would be beneficial if the FNV Campaign enlisted more entertainers and more women because young people are also attracted to TV or movie superstars and musicians. Studies show that adolescents spend two to three hours listening to music per day.^{39,40} Moreover, young celebrities who use social media such as twitter, Instagram and YouTube may be more influential among their peers than TV or movie superstars.^{41,42}

Every generation has unique expectations, experiences, values and demographic characteristics that influence their purchasing and consumption habits.⁴³ As mentioned earlier, Nielsen marketing research suggests that Generation Z teens (ages 15-20 years) and Millennials (ages 21-34 years) trust celebrities more than older generations including: Generation X (ages 35-49 years), Baby Boomers (ages 50-64 years) and those older than 65 years.³⁰

Facebook is the most popular social media platform compared to other platforms, although about 53% of online Millennials (ages 18-29 years) use Instagram, and about half of them use Instagram daily.⁴⁴ A 2015 Pew Research Center report found that 92 percent of American Generation Z teens, ages 13 to 17 years, report going online daily including 24 percent who say that they go online to use social media "almost constantly."⁴⁵ Fitness and nutrition are the top issues that teens research online, and about a third of American teens report that they have changed their behavior as a result of online health information or using other digital health tools.⁴⁶ Generation Z teens tend to use more visual forms of social media (i.e., YouTube, Instagram, SnapChat or Vine) compared to older adults, especially African-American and Latino/a teens.⁴⁷ Teens also tend to use social media more often to seek health information compared to broadcast media (i.e., TV and radio) and print media (i.e., newspapers, magazines or books).⁴⁶

Marketers offer the following advice to effectively "break through the clutter" with messages that reach Generation Z teens:

- (1) be authentic to help them see the human connection with a brand;
- (2) identify and use the right combination of social media platforms;
- (3) take advantage of user-generated content;
- (4) offer participatory and customized experiences that allow them to express creativity;
- (5) find a good match between a brand and a celebrity or influencer; and
- (6) offer an experience instead of a prize.⁴⁸



Our analysis showed that nearly two thirds of the FNV celebrities (62%; n=51) are between the ages of 21 and 34 years. These results suggest that the PHA has taken the “fit” of age into consideration when choosing celebrities to target Millennial moms. However, only 6% (n=5) of the FNV celebrities are between the ages of 15 and 20 years, which underrepresents the target population of Generation Z teens. The PHA may want to enlist younger celebrities who are popular among teens to promote fruits and vegetables through diverse social media platforms such as: actress Rowan Blanchard, athlete Simone Biles, or the YouTube stars Jennifer Ann and Lia Marie Johnson.^{49,50}

Racial and ethnic congruence play an important role in the effectiveness of celebrity endorsement because consumers prefer to emulate celebrities in their own racial or ethnic groups, and marketers are increasingly tailoring their marketing to multi-cultural audiences.⁵¹ Our analysis showed that white and black or African-American celebrities dominate the FNV celebrity racial composition (89%; n=73) whereas multi-cultural (5%; n=4), Latino/a (4%; n=3) and Asian-American (2%; n=2) celebrities are currently not well represented by the FNV Campaign. We suggest that the PHA enlist more Hispanic or Latino/a and Asian-American celebrities, especially in larger U.S. cities where the FNV Campaign has expanded (i.e., Los Angeles, San Francisco, Dallas, Chicago and Miami) because these areas have a substantial proportion of racially, ethnically, and culturally diverse populations.

Future Research

The Team FNV website states that “Research shows that nothing moves product like celebrities. So naturally, we want in on that action. That’s why we’re recruiting super influential people like actors, athletes, and not your mom to get you to eat more Fruits & Veggies.”³³ While this is an attractive proposition, there is a need to examine the lesson learned from other celebrity endorsement campaigns, and to identify the specific circumstances and contextual factors that may facilitate celebrity endorsement being used effectively to promote healthy food and beverage groups and products to targeted populations.

For example, the *Milk Mustache* Campaign was launched by the National Fluid Milk Processor Promotion Board (MilkPEP) in 1995.⁵² While it was separate from the *Got Milk?* Campaign, both used co-branded taglines (e.g., *Got Milk?* and *Where’s your mustache?*). The *Milk Mustache* Campaign used photographs taken by Annie Leibowitz of more than 300 popular entertainment, sports, political and media celebrities used in print, online, broadcast and TV commercials to target ethnically and racially diverse audiences to promote a milk mustache associated with drinking a glass of milk.^{53,54} While these MilkPEP campaigns were considered to be iconic and memorable,^{52,53} they did not lead to increased U.S. fluid milk sales and consumption during the 20-year period that they ran from 1995 to 2015. This was attributed in part to marketing competition from other beverages including: SSB, non-dairy beverages (i.e., soy and nut milks), juices and water.⁵⁵

Marketing research suggests that to optimize the use of celebrity endorsement, businesses and non-profit organizations should seek to partner with celebrities based on credibility (measured by trust, attractiveness, and expertise) and congruence (representing the “fit” between a celebrity and a target group and between the celebrity and a specific brand).^{29,56} Research also suggests that marketers need to pay close attention to the “fit” between the endorsed brand and celebrities (especially for multiple endorsers), as well as between specific celebrities and the target audiences.⁵⁷ When consumers are more attached to a celebrity, many brand or product endorsements may negatively influence their purchase intent.⁵⁸ Moreover, research shows that celebrity familiarity is positively related to the effectiveness of an endorsement,⁵⁹ so there is a need to test whether the target population easily recognizes the FNV Campaign celebrities.

Experimental research is needed to explore how target populations understand and respond to the FNV Campaign, especially within the context of the prevailing food marketing environment that promotes primarily unhealthy HFSS food and beverage products. Future research will help to build an



evidence base to demonstrate whether the celebrity component of the FNV Campaign is an effective strategy to encourage Americans to purchase and consume more fruits and vegetables to support a healthy diet.

Future research should:

- Test existing theoretical frameworks and conceptual models to understand whether or not racially, ethnically and culturally diverse groups recognize celebrities involved in the FNV Campaign, and whether they associate the celebrities with fruits and vegetables versus other food and beverage groups, brands and product categories.
- Examine how Americans exposed to the FNV Campaign across various U.S. geographic locations view the credibility (i.e., trust, attractiveness and expertise) of celebrities involved in the FNV Campaign, and congruence or “fit” between the celebrity and target groups, as well as the celebrity and the FNV brand.
- Explore how targeted populations think about celebrities who serve as multiple endorsers for brands associated with healthy food and beverage groups (i.e., fruits and vegetables and non-fat dairy) versus energy-dense and nutrient-poor food and beverage categories (i.e., sugar-sweetened beverages, chain restaurant meals, salty and sugary snacks and desserts).
- Compare the effectiveness of celebrity endorsement associated with the FNV Campaign across different age and ethnic/racial groups, as well as marketing and media channels (i.e., print and broadcast media; social and digital interactive media; sponsored community events; and in-store food-retail marketing).
- Assess consumers’ views about the in-store food retailer messages delivered by the FNV Campaign celebrities through posters and placards.
- Analyze the existing policy landscape to inform smarter policies and actions that can be taken by government, private-sector actors, and non-governmental organizations to leverage celebrity marketing to promote only brands associated with healthy food and beverage product profiles and that support healthy food environments.⁶⁰

Conclusions

Celebrity endorsement may be a potentially important component of the FNV Campaign’s commercial and behavioral branding principles and the strategies of integrated marketing communications to encourage greater sales and consumption of fruits and vegetables among Americans. Celebrity endorsers can be a powerful influence especially on children and adolescents who seek aspirational role models whom they emulate. However, existing research on celebrity marketing suggests that a majority of the nearly \$77 million spent by 48 companies to market to teens in 2009 were primarily used to promote branded HFSS food and beverage products including: SSB, salty and sweet snack foods, QSR meals, juice and non-carbonated beverages, candy/frozen desserts, and breakfast cereals.

We conclude that insights from other celebrity endorsement campaigns should be used to identify the specific circumstances and contextual factors that may facilitate celebrity endorsement in order for it to be used effectively to promote healthy food and beverage groups and products to targeted populations. There is also a need to conduct experimental research and independent evaluations to build an evidence base that can demonstrate whether the celebrity component of the FNV Campaign will be effective to encourage the targeted populations to purchase and consume fruits and vegetables to support a healthy diet as the PHA expands the FNV Campaign to other cities and states nationwide.



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