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What's for Breakfast? An Analysis of American Breakfast Food Advertisements and the Promotion of Binge Eating Disorder Behaviors

ABSTRACT

"They're great!!" an animated Tiger named Tony shouts as both children and adults cheer about the introduction of a new cereal that is chocolate frosted. Later in the 15-second commercial, children are encouraged to *"LET YOUR GR-R-REAT OUT"* with wording that appears above an image of a father and son eating cereal together seated closely on a sofa. This ad, which first aired on January 1, 2018 and stopped airing on October 1, 2018 received over 4 billion TV impressions of which more than 3.8 billion were shown nationally. And, as most of those watching were unaware, it also included 8 portrayals of Binge Eating Disorder (BED) behaviors. Currently, there is no research examining the promotion of Binge Eating Disorder behaviors in American breakfast food advertisements. However, a study by Danowski examined BED behaviors in snack foods using a BED Advertising Analysis Chart (BEDAAC) to measure addictive, behavioral, emotional, and physical characteristics of Binge Eating Disorder. This current study will use the BEDAAC as it seeks to fill the research void by examining breakfast food advertisements, specifically cereal, yogurt and bread, to determine the presence of Binge Eating Disorder indicators. In total, 75 ads were analyzed. Of these, 100% portrayed signs of using food to relieve emotional discomfort/seek emotional change. 99% included representations of deep emotional attachment to food. 87% contained portrayals of using food to replace relationships or as a means of bonding.

KEY WORDS

Food Advertisements. Binge Eating Disorder. Cereal. Yogurt. Bread.

1 Introduction

Binge Eating Disorder was first recognized as a diagnosable eating disorder by the American Psychological Association in 2013 “to increase awareness of the substantial differences between binge eating disorder and the common phenomenon of overeating”.¹ Unlike occasional overeating, Binge Eating Disorder is identified by eating more food than most others would eat in a short amount of time while feeling out of control.² Those suffering from Binge Eating Disorder feel guilty, embarrassed, ashamed, and disgusted oftentimes eating even though they are full and eating alone to hide their behaviors.³ Binge Eating Disorder is marked by feelings of depression, hopelessness, and distress. Unlike overeating “recurrent binge eating is much less common, far more severe, and is associated with significant physical and psychological problems” which do not involve purging behaviors.⁴ Additionally, Binge Eating Disorder “is associated with marked distress and occurs, on average, at least once a week over three months”.⁵

Research has shown that three out of ten individuals who look for and/or participate in weight loss treatments suffer from Binge Eating Disorder.⁶ Similarly, it has been proven that Binge Eating Disorder is three times more common than anorexia and bulimia combined and more common than breast cancer, HIV and schizophrenia.⁷ According to the National Eating Disorders Coalition, individuals who are overweight are at an increased risk of developing eating disorders as are those who engage in unhealthy behaviors such as purging, using diet pills and fasting.⁸ The same article points to other risk factors which include both social factors such as peer and familiar pressure to maintain certain body sizes as well as societal factors including “sociocultural norms, media exposure and weight discrimination”.⁹

The importance of including media exposure in a list of risk factors for developing eating disorders points to the value of the current study. Many experts estimate that Americans see approximately 5,000 ads per day. Considering this, the study of the behaviors presented in these advertisements becomes crucial to understanding the risks and norms in media portrayals. Add to this, Social Learning Theory suggests that learning takes place through observing the behavior of others¹⁰ and has been found particularly valuable in analyzing the possible effects of television violence, but it is also a general theory of learning that can be applied to other areas of mass media effects¹¹ thus validating the importance of analyzing the messages sent out through mass media and specifically, in the current study, breakfast food advertisements.

1.1 Cost of Binge Eating Disorders

Streatfield et al. studied the social and economic costs of eating disorders in the United States. The researchers began with the objective of identifying the one-year cost to not only the health

¹ American Psychiatric Association DSM-5 Fact Sheets. [online]. [2022-09-14]. Available at: <<https://www.psychiatry.org/psychiatrists/practice/dsm/educational-resources/dsm-5-fact-sheets>>.

² Ibidem.

³ Ibidem.

⁴ Ibidem.

⁵ Ibidem.

⁶ See: WESTERBERG, D. P., WAITZ, M.: Binge-Eating Disorder. In *Osteopathic Family Physician*, 2013, Vol. 5, No. 6, p. 230-233.

⁷ See also: HUDSON, J. L. et al.: The Prevalence and Correlates of Eating Disorders in the National Comorbidity Survey Replication. In *Biological Psychiatry*, 2007, Vol. 61, No. 3, p. 348-358.

⁸ *Eating Disorders and People of Higher Weight*. [online]. [2022-09-09]. Available at: <<https://nedc.com.au/eating-disorders/eating-disorders-explained/people-living-in-larger-bodies-and-eating-disorders/>>.

⁹ Ibidem.

¹⁰ See: BANDURA, A., WALTERS, R. H.: *Adolescent Aggression*. New York : Ronald Press, 1959.

¹¹ See also: SEVERIN, W. J., TANKARD, J. W. Jr.: *Communication Theories: Origins, Methods, and Uses in the Mass Media*. New York : Longman, 2001, p. 262-292.

care system but also those to productivity, wellbeing, as well as other economic costs. They estimated the costs of eating disorders by using “*bottom-up cost-of-illness methodology, based on the estimated one-year prevalence of eating disorders*” and the “*intangible costs of reduced wellbeing*” estimations by “*using disability-adjusted life years*”.¹²

The researchers found that eating disorders cost “\$64.7 billion in fiscal year 2018-2019, equivalent to \$11,808 per affected person” with 30% of these costs directly related to Binge Eating Disorder.¹³ They also noted that the reduction in wellbeing costs associated with all eating disorders was valued at \$326.5 billion pointing to a total of nearly \$400 billion during the fiscal year studied.¹⁴ They further note an “urgency” to identify policy actions to help reduce eating disorders.¹⁵ This “urgency” is important as it relates to the identification of binge eating disorder behaviors in the current study. Identification of the binge eating behaviors in food advertisements is a logical first step in developing future advertising regulation policies.

It’s worth noting that increased spending on advertising contributes to the number of advertisement individuals see. As one researcher points out: “*Corporations now spend more than \$200 billion a year on advertising in the U.S. alone, a figure that’s greater than the total GDP of many countries.*”¹⁶

1.2 Influence of Food Advertisements

The theoretical foundation of the study of advertising’s influence on food choices was created by Bandura’s Social Learning Theory. Though Bandura’s classic “Bobo Doll” studies in the early 1970s focused on aggression being something that children can learn through observation¹⁷ subsequent research has proven this to be the case with advertising and other behaviors as well. For example, a classic study by Wilson and Blackhurst of food advertisements in women’s magazines concluded that these ads can “*mirror the painful, obsessive states of body hatred, weight preoccupation, and compulsive dieting*” so “*that women with eating disorders cannot help but recognize themselves*” in the “*casual, almost upbeat tone of the advertisements*” where “*disordered eating is portrayed as normal, even humorous, and without emotional or physical consequences*”.¹⁸ The researchers in this study concluded that, “*...food advertisements may be even more harmful than the fashion and beauty advertisements*” due to the fact that “*food advertisements not only promote the thin ideal, but also explicitly endorse high-risk eating behaviors as a way of attaining that ideal*”.¹⁹

Wilson and Blackhurst point to the deconstruction of “*potentially harmful messages in food advertisements*” as being “essential” due to the “powerful messages” in these advertisements.²⁰ They further note that, “*eliminating these messages in food advertisements as well as other media will be central to reducing the prevalence of eating disorders*”.²¹ The note by researchers about the importance of identifying “*potentially harmful messages in food advertisements*” as

¹² STREATFIELD, J. et al.: Social and Economic Cost of Eating Disorders in the United States: Evidence to Inform Policy Action. In *International Journal of Eating Disorders*, 2021, Vol. 54, No. 5, p. 851.

¹³ Ibidem.

¹⁴ Ibidem.

¹⁵ Ibidem.

¹⁶ JHALLY, S. (Director): *Advertising at the Edge of the Apocalypse*. [DVD]. Northampton, MA : Media Education Foundation, 2017.

¹⁷ See: BANDURA, A., WALTERS, R. H.: *Adolescent Aggression*. New York : Ronald Press, 1959.

¹⁸ WILSON, N. L., BLACKHURST, A. E.: Food Advertising and Eating Disorders: Marketing Body Dissatisfaction, the Drive for Thinness, and Dieting in Women’s Magazines. In *Journal of Humanistic Counseling, Education & Development*, 1999, Vol. 38, No. 2, p. 119.

¹⁹ Ibidem.

²⁰ Ibidem.

²¹ Ibidem.

being “essential” directly relates to the value of the current study. The identification of binge eating disorder behaviors in food advertisements is a first step in the deconstruction process.

The power of food advertisements to change eating behaviors was later reinforced in a study by Rusmevichientong et al. but this time with a different approach. The researchers studied the impact of food advertising on consumers’ choices of lunch items. A total of 186 participants were divided into four groups. One group watched healthy food advertisements, a second group anti-obesity advertisements, a third group unhealthy food advertisements and a fourth group watched a mix of the three different types of advertisements. The researchers concluded that “*healthy, anti-obesity, and mixed food advertising reduced intakes of total calories, fat, sodium, and carbohydrates*” and that exposure to these types of advertisements resulted in “*the probability of selecting more healthy items and fewer unhealthy items from a menu*”.²² This study reinforces the power of food advertisements to affect eating behaviors which points to the need to identify those behaviors as in the current study.

Research that same year by Zimmerman and Shimoga further reinforced the educational nature and power of food advertisements to influence food choices. In this study, students at UCLA were recruited to watch pre-recorded movie segments including advertisements. Food advertisements were included in two of the groups while the other two included no food advertisements. Following the viewing there was a brief break for snacks. The researchers found that, “*those exposed to food advertising took a set of snacks with 65 more calories than those exposed to non-food advertising*”.²³ This led researchers to conclude that, “*televised food advertising has strong effects on individual food choice*”.²⁴

More recently, research by Smith et al. about food advertisement placement in video games once again reinforced the fact that food advertisements influence eating behaviors. In this study, Australian children 7 to 12 years old were given a four-minute online game to play. Children were divided into four groups, in which some were shown advertisements and one of which included “rewarded video advertisements” where children were given rewards within the game for watching the advertisement. The researchers concluded that, “*children’s choice of the test brand was significantly influenced by the rewarded video advertising condition*” thus again highlighting the influence advertising has on food choices.²⁵

Another study in 2019 by Castonguay et al. looked at adolescents’ responses to cereal ads and how the body weight of the characters in the ads affects perceived healthfulness of the advertised product. In this study, adolescents aged 12 to 14 years old were shown advertisements at random and provided with an online survey about their responses to the ad. The ads were created by a graphic designer to create male and female characters who were either thin or overweight. It was concluded that “*higher BMI adolescents in particular believe a food to be healthier when promoted by a thin character*”.²⁶

The findings from the Castonguay et al. study are especially pertinent to the current research. In their study, the researchers proved that heuristic health cues influence perception of food healthfulness in food advertising, thus reinforcing the instructional nature of advertisements as well as their effect on attitudes and behaviors about food and eating. This study as well as those previously mentioned points to the importance of identifying unhealthy eating portrayals in food advertising as a means of creating awareness and ultimately regulation of the advertisements both children and adults see, which is the focus of the current study.

²² RUSMEVICHIENTONG, P. et al.: The Impact of Food Advertisements on Changing Eating Behaviors: An Experimental Study. In *Food Policy*, 2014, Vol. 44, p. 59.

²³ ZIMMERMAN, F. J., SHIMOGA, S. V.: The Effects of Food Advertising and Cognitive Load on Food Choices. In *BMC Public Health*, 2014, Vol. 14, No. 1, p. 1.

²⁴ Ibidem.

²⁵ SMITH, R. et al.: Advertising Placement in Digital Game Design Influences Children’s Choices of Advertised Snacks: A Randomized Trial. In *Journal of the Academy of Nutrition & Dietetics*, 2020, Vol. 120, No. 3, p. 404.

²⁶ CASTONGUAY, J. et al.: Adolescents’ Responses to Cereal Ads: An Assessment of Weight and Gender. In *Journal of Food Products Marketing*, 2019, Vol. 25, No. 8, p. 785.

1.3 Binge Eating Disorder Promotion in Advertising

Currently, there is no research specifically examining American food advertisements for cereal, yogurt, and bread as they relate to the promotion of Binge Eating Disorder. However, a 2019 study examined Binge Eating Disorder and Food Addiction behaviors in American advertising in ice cream, candy, cookies, chips, snack cakes, cereal, granola bars, fast food, frozen prepared meals and fruit yogurt advertisements. In this study, only five brands in each category were analyzed and only two ads from each specific product, one current and one older were used. Additionally, bread advertisements were not researched.

In the Danowski study, a BED (Binge Eating Disorder) Advertising Analysis Chart (BEDAAC) was created to measure addictive, behavioral, emotional, and physical characteristics of Binge Eating Disorder. To create the chart, “*information was used from the Diagnostic and Statistical Manual of Mental Disorders (DSM-5), the Food Addiction Institute and the National Eating Disorders Association. Criteria based on intake/diagnostic questions for potential patients and the general public were re-written to reflect use in food advertisement analysis*”.²⁷

In the Addictive category, the following characteristics were included: (A1) Signs of using food to relieve emotional discomfort/seek emotional change; (A2) Evidence of neglecting daily responsibilities due to eating; (A3) Representations of deep emotional attachment to food; (A4) Indicators of doing anything to obtain food/inability to control cravings; (A5) Portrayals of using food to replace relationships or as a means of bonding.²⁸

In the Behavioral section, the characteristics included there are: (B1) Images of eating alone; (B2) Signs of stealing, hiding, or hoarding food; (B3) Portrayals of frequent dieting/appetite control/grazing throughout the day; (B4) Evidence of frequently checking the mirror for body flaws; (B5) Signs of food rituals (won't let foods to touch, only eating red candy, etc.).

In the Emotional category, the following characteristics were included: (E1) Portrayals of feeling out of control with regard to food; (E2) Indicators of feelings of guilt, shame, embarrassment, disgust with eating; (E3) Evidence of distress before or after eating; (E4) Portrayals of feeling uncomfortable eating around others; (E5) Representations of negative feelings about body weight/size/shape.

In the Physical section, the characteristics included there are: (P1) Representations of large amounts of food; (P2) Indications of eating quickly; (P3) Signs of difficulty concentrating due to food presence/thoughts; (P4) Portrayals of weight fluctuations; (P5) Indicators of stomach/gastrointestinal distress/complaints.²⁹

1.4 Breakfast Food Sales

Breakfast has been labelled the most important meal of the day by doctors and nutritionists³⁰ is one of the most advertised meals by corporations and is coveted by food manufacturers for decades as one of the most lucrative revenue streams.³¹ According to statistics company

²⁷ DANOWSKI, D.: Bet You Can't Eat Just One: Binge Eating Disorder Promotion in American Advertising. In *Media Literacy and Academic Research*, 2019, Vol. 2, No. 1, p. 10.

²⁸ Ibidem, p. 11.

²⁹ Ibidem.

³⁰ DONNELLY, S. C.: Breakfast - The Most Important Meal of the Day!! In *QJM: An International Journal of Medicine*, 2018, Vol. 111, No. 10, p. 681; See also: RANI, R. et al.: Importance of Not Skipping Breakfast: A Review. In *International Journal of Food Science & Technology*, 2021, Vol. 56, No. 1, p. 28-38.

³¹ BURROWS, D.: *America's Most Popular Breakfast Cereals (And the Stocks behind Them)*. [online]. [2022-09-09]. Available at: <<https://www.kiplinger.com/slideshow/investing/t052-s001-america-s-most-popular-breakfast-cereals-stocks/index.html>>.

Statista, breakfast food sales in grocery departments alone topped over \$18.7 billion. Three of the main staples of breakfast include cereal, yogurt, and bread.³²

Over 40% of the \$18.7 billion figure or \$8.5 billion can be attributed to breakfast cereal sales.³³ Despite a slight decrease in sales during 2018, cereal product revenue is expected to increase over the next few years due to millennials using cereal as a snack food.³⁴

Similarly, some industry experts expect yogurt sales to reach \$9 billion despite a slight dip in sales over the past few years.³⁵ “Yogurts with new flavors and in new formats, such as glass jars, have also kept consumers interested in the category, and have helped broaden yogurt’s appeal as a breakfast item, snack, dessert or meal replacement.”³⁶

Though bread is still an important part of breakfast, sales remained flat while still holding at \$9.1 billion with whole wheat at 45% being the most popular flavor among all generations.³⁷ Following this, white bread at 43% and multi-grain at 22% are the next popular bread flavors.³⁸

Cereal Advertisements

There exists a large body of research on advertising sugary cereals to children. More recently, Longacre et al. and Emond et al. studied television advertising as it relates to consumption of high-sugar cereal. Longacre et al. recruited parents of children ages 3 to 5 years old to report whether their children had watched 11 designated children’s television channels over a week time period. From this, researchers calculated the children’s exposure to high-sugar breakfast cereal based on advertising data during that same time frame.

Researchers concluded that 40.6% of the children studied saw child-targeted ads for high-sugar cereal during the week. It was also concluded that, “children consumed 14% more SBC [high-sugar breakfast cereal] brands for every 10 SBC ads seen in the past 7 days”.³⁹ The researchers found that there was a positive association between the advertising of high-sugar cereals and consumption in preschool-aged children.⁴⁰

The results of this study were consistent with a later one by Emond et al. which also examined preschoolers’ intake of high-sugar breakfast cereal after exposure to child-directed television ads. Researchers in this study concluded that, “findings indicate that child-directed advertising influences begin earlier and last longer than previously demonstrated, highlighting limitations of current industry guidelines regarding the marketing of high-sugar foods to children under age 6 years”.⁴¹

Yogurt Advertisements

Though research on breakfast cereal is plentiful, studies about yogurt and bread advertisements are limited. Brennan researched Greek yogurt maker Chobani’s controversial slogan, “Nature

³² U.S. Breakfast Foods: Statistics & Facts. [online]. [2022-09-09]. Available at: <https://www.statista.com/topics/1661/breakfast-foods/#topicHeader__wrapper>.

³³ BURROWS, D.: *America’s Most Popular Breakfast Cereals (And the Stocks behind Them)*. [online]. [2022-09-09]. Available at: <<https://www.kiplinger.com/slideshow/investing/t052-s001-america-s-most-popular-breakfast-cereals-stocks/index.html>>.

³⁴ Ibidem.

³⁵ TURCSIK, R.: *Yogurt Sales Approach \$9 Billion*. [online]. [2022-09-09]. Available at: <<https://www.supermarketnews.com/dairy/yogurt-sales-approach-9-billion>>.

³⁶ Ibidem.

³⁷ BROWNE, M.: *What Consumers Want from Their Daily Bread*. [online]. [2022-09-09]. Available at: <<https://www.supermarketnews.com/bakery/what-consumers-want-their-daily-bread>>.

³⁸ Ibidem.

³⁹ LONGACRE, M. R. et al.: Child-Targeted TV Advertising and Preschoolers’ Consumption of High-Sugar Breakfast Cereals. In *Appetite*, 2017, Vol. 108, No. 1, p. 295.

⁴⁰ Ibidem.

⁴¹ See: EMOND, J. A. et al.: Exposure to Child-Directed TV Advertising and Preschoolers’ Intake of Advertised Cereals. In *American Journal of Preventive Medicine*, 2019, Vol. 56, No. 2, p. e35-e43.

got us to 100 calories, not scientists”⁴² and Chadzynski examined marketing initiatives in the yogurt industry in Poland.⁴³ An article titled “David Newnham is Astounded and Distracted by Yoghurt” in *Nursing Standard* examined the contrast between yogurt television advertisements and the benefits to human health.⁴⁴

Bread Advertisements

Research specifically focused on bread advertisements is limited. Pohjanheimo et al. studied bread choices based on individual’s personal values⁴⁵ while Chang and Tseng examined the use of sexual appeals in advertising using images of bread among others.⁴⁶

2 Methodology

The combination of textual analysis combined with case study methodology allows for both an overview of large amounts of material as well as specific focus on some which is appropriate for this study considering the many images and words in the 75 commercials viewed. As Beetham points out, “textual reading depends on close attention to particularities” while case study methodology provides “a way of dealing with the sheer mass of material” involved in a large study.⁴⁷ This combination as outlined by Beetham in her study of women’s magazines is a valid research methodology for analyzing media texts. As Beetham notes, “treating the magazine as a text” allows for consideration of the “way it developed as a form over a period of time” while case study methodology allows for research about “expressions of ideas and ideology” in media texts as well as study about representations of “particular moments”.⁴⁸ Though she refers to women’s magazines, it’s not difficult to translate these ideas for use in advertising texts.

The importance of content analysis methodology to “quantify and analyze the presence, meanings and relationships of such certain words, themes, or concepts” has been reinforced in the public health field as well.⁴⁹ This method allows researchers to “make inferences about the messages within the texts, the writer(s), the audience, and even the culture and time of surrounding the text”⁵⁰ making these methods are ideally suited for use in the analysis of binge eating disorder behaviors in food advertisements.

Raw Data Chart

A Raw Data Chart, which included five categories: Name of the Product, Gender Representation (broken down by Adult Male or Female and Male or Female Children), the Date the last time the commercial was aired or posted, the BEDAAC label and a Link to the Ad was created. Following this, a search was conducted using Google to find the top-selling brands in each of the three categories (cereal, yogurt, and bread). From this, five commercials from each of the

⁴² BRENNAN, M.: Blogroll: Yoghurt vs Scientists. In *Nature Chemistry*, 2014, Vol. 6, No. 8, p. 657.

⁴³ See: CHADRZYNSKI, M.: Product and Marketing Innovation on the Yoghurt Market in Poland. In AUZINA, A.: *Economic Science for Rural Development Conference Proceeding*. Jelgava : Latvia University of Life Sciences and Technologies, 2013, p. 158-164.

⁴⁴ See: NEWNHAM, D.: David Newnham is Distracted and Astounded by Yoghurt. In *Nursing Standard*, 2007, Vol. 22, No. 13, p. 26-27.

⁴⁵ See also: POHIANHEIMO, T. et al.: Food Choice Motives and Bread Liking of Consumers Embracing Hedonistic and Traditional Values. In *Appetite*, 2010, Vol. 54, No. 1, p. 170-180.

⁴⁶ See: CHANG, C. T., TSENG, C. H.: Can Sex Sell Bread? In *International Journal of Advertising*, 2013, Vol. 32, No. 4, p. 559-585.

⁴⁷ BEETHAM, M.: *A Magazine of Her Own? Domesticity and Desire in the Woman's Magazine, 1800-1914*. New York : Routledge, 1996, p. 5.

⁴⁸ *Ibidem*, p. 6.

⁴⁹ *Content Analysis*. [online]. [2022-09-10]. Available at: <<https://www.publichealth.columbia.edu/research/population-health-methods/content-analysis>>.

⁵⁰ *Ibidem*.

top brands were analyzed for a total of 75 advertisements. Wherever possible, the most current commercials were used. Each advertisement was analyzed for behaviors outlined in the BED Advertising Analysis Chart (BEDAAC)⁵¹ then recorded in the Raw Data Chart.

In order to complete the chart, each commercial was viewed a minimum of six times by two different researchers individually at separate times. The first time was an initial viewing to determine the basic elements and message of the commercial. The second viewing was to record gender representation in the commercial as well as a preliminary analysis of the eating behaviors portrayed. The third viewing was to compare the behaviors listed in the Addictive section of the BEDAAC to those in the commercial. The fourth was to compare behaviors in the Behavioral section of the BEDAAC while the fifth and sixth were to compare behaviors in the Emotional then Physical sections of the BEDAAC.

Once the Raw Data Chart was completed for all 75 commercials by each researcher individually, the Find Tool was used in Microsoft Word to count the number of occurrences for each label. Following this, the two researchers compared results and discussed any discrepancies to create one shared results chart. These numbers were double checked by both researchers then a percentage was calculated for each of the 20 characteristics listed on the BEDAAC.

Intercoder Reliability

Intercoder reliability allows for assessment of agreement among multiple researchers and their assignment of codes to texts and allows for evaluation of whether coders make similar decisions in their research. Though Cohen's kappa is an accepted method of evaluating agreement among researchers and an online calculator⁵² was used in this study to calculate researcher agreement when using the BEDAAC chart, *"the calculation of chance can lead to some oddities" when "identical marginals across raters can lead to lower kappa due to increased degree of chance, but chance itself is determined because the raters agreed"*.⁵³ This is true in the current study and will be discussed in the results section.

Furthermore, though disagreement among researchers was calculated as a means of establishing intercoder reliability, the goal of this study was to complete one shared results chart to better determine the presence of binge eating disorder behaviors in food advertisements as mutually agreed upon by both researchers, which Syed and Nelson identify as a means to *"reconcile differences via consensus"*.⁵⁴ To align with this goal, after individually, separately, and blindly to each other's conclusions, each researcher completed their own BEDAAC chart, then the researchers compared their results. Any disagreements were viewed, analyzed, and discussed among the two researchers until agreement was reached on the specific behaviors presented in each of the ads thus creating one shared results chart.

3 Results

In total, 75 ads were analyzed by two different researchers. The first researcher concluded that all 75 commercials included at least one BED behavior while the second researcher identified 71 commercials portraying BED behaviors. A total of 355 portrayals of BED behaviors in the 75 commercials were recorded by the first researcher and a total of 319 by the second researcher.

⁵¹ See: DANOWSKI, D.: Bet You Can't Eat Just One: Binge Eating Disorder Promotion in American Advertising. In *Media Literacy and Academic Research*, 2019, Vol. 2, No. 1, p. 6-23.

⁵² Autor's note: Cohen's kappa free calculator, available at: <<https://idostatistics.com/cohen-kappa-free-calculator/#risultati>>.

⁵³ SYED, M., NELSON, S. C.: Guidelines for Establishing Reliability When Coding Narrative Data. In *Emerging Adulthood*, 2015, Vol. 3, No. 6, p. 387.

⁵⁴ Ibidem, p. 384.

Using a Cohen's kappa calculator agreement among researchers was calculated where, a Cohen's k of 0.2645 was achieved among researchers which notes a fair level of agreement. In order to use Cohen's kappa, the total number of binge-eating disorder behaviors (1,500) was used as the possible agreement level among researchers. This number represents the 20 behaviors outlined on the BEDAAC chart multiplied by the total number of ads viewed (75). The researchers both agreed to exclude 1,181 BED behaviors from the 75 ads while the first researcher agreed to include 355 and the second researcher 319. As noted previously, a high level of agreement among researchers lowers the Cohen's k score which is the case in the current study.

Among the researchers, there was agreement on 319 BED behaviors and disagreement on 36. The majority of disagreements fell in the B3 (portrayals of frequent dieting/appetite control/grazing throughout the day) category with 10 disagreements. Following this, there were nine disagreements in the P2 category (Indications of eating quickly), five each in the E1 (Portrayals of feeling out of control with regard to food) and the P3 (Signs of difficulty concentrating due to food presence/thoughts) categories, two each in the A2 (Evidence of neglecting daily responsibilities due to eating and E2 (Indicators of feelings of guilt, shame, embarrassment, disgust with eating categories, and one each in the A4 (Indicators of doing anything to obtain food/inability to control cravings), B2 (Signs of stealing, hiding, or hoarding food, and E4 (Portrayals of feeling uncomfortable eating around others) categories.

Each disagreement was reviewed and discussed by the two researchers with the goal of "*reconciling differences via consensus*"⁵⁵ to create a shared results chart. During this process, it was discovered that in the B3 area, one of the researchers failed to see signs of grazing throughout the day, which were detected by the other researcher through portrayals of light to reflect times of day and amounts of food present in the ads. Additionally, in the P3 area, the two researchers individually defined indications of eating quickly differently but were able to come to agreement on a shared definition that included as in the case of the Frosted Flakes "*Show Your Stripes*" (2013) ad, taking another bite while still chewing or in the Pepperidge Farm Raisin Cinnamon Swirl (2019) ad, animated bites that occurred without a break for chewing (2019).

Of the 355 BED portrayals, 132 or 37% of these were in yogurt product ads, 126 or 35% were in cereal advertisements, and 97 or 27% were in bread ads. Of the ads studied, 100% or 75 portrayed (A1) signs of using food to relieve emotional discomfort/seek emotional change. 99% or 74 included (A3) representations of deep emotional attachment to food. 75% or 56 contained (A5) portrayals of using food to replace relationships or as a means of bonding. 47% or 35 showed either (B1) images of eating alone and/or (P1) representations of large amounts of food.

On the lower end, 1% or one of the portrayals were of (E4) portrayals of feeling uncomfortable eating around others; (P4) portrayals of weight fluctuations; and (B4) evidence of frequently checking the mirror for body flaws. 3% or three were of (E5) representations of negative feelings about body weight/size/shape and 4% or three of the portrayals were of (E2) indicators of feelings of guilt, shame, embarrassment, disgust with eating.

The Cinnamon Toast Crunch "*Churros For Anytime*" (2019) ad contained the largest amount of BED behaviors with 10 occurrences. (A1, A2, A3, A4, A5, B2, B3, E1, P1, P2). Thirty-two of the 75 ads analyzed, or 43% included five or more behaviors listed on the BED Chart. Of these, 10 were cereal advertisements, 16 were yogurt ads, and six were bread advertisements. Additionally, five of the ads contained two portrayals of BED behaviors. Of these, all but one (Honey Nut Cheerios – "*To The Honey*" (2019)) were bread advertisements. Every ad studied contained at least two BED behaviors with an average of approximately five per advertisement.

⁵⁵ SYED, M., NELSON, S. C.: Guidelines for Establishing Reliability When Coding Narrative Data. In *Emerging Adulthood*, 2015, Vol. 3, No. 6, p. 384.

Mmmm Chocolate!

In the 2018 *Mmmm Chocolate!* Chocolate Frosted Flakes advertisement, young children and an adult male are shown exclaiming the virtues of the chocolate added to the cereal along with Tony the Tiger. The adult male and the male child are shown cheering, “*Yeah! Chocolate!*” while others are dancing to the words, “*Mmmm chocolate*” with one female child even holding her arm out and appearing to pass out from excitement about the chocolate added to the cereal. All of this is underscored by an enthusiastic male announcer who says, “*Crunch into chocolate greatness!*” just before Tony ends the commercial with “*They’re great!*” and the words “*LET YOUR GR-R-REAT OUT!*” appear under Chocolate Frosted Flakes.⁵⁶

Using the criteria from the BED Advertising Analysis Chart, this ad included the following addictive behaviors: (A1) Signs of using food to relieve emotional discomfort/seek emotional change; (A3) Representations of deep emotional attachment to food; and (A5) Portrayals of using food to replace relationships or as a means of bonding as well as the following behavioral actions: (B1) Images of eating alone and (B3) Portrayals of frequent dieting/appetite control/grazing throughout the day, the following emotional behaviors: (E1) Portrayals of feeling out of control with regard to food and the following physical behaviors: (P1) Representations of large amounts of food; and (P3) Signs of difficulty concentration due to food presence/thoughts.

Drawing on Potter’s idea about altered reality this example shows how children (and adult) cereal consumers are promised that the addition of chocolate to an already sugar-filled cereal will change their lives and make them and their lives great. The association of happiness to the cereal, the deep emotional attachment to sugary cereal, the images of food related to physical activity and the portrayal of food as a means of replacing relationships or bonding all contribute to one message: Eating this cereal will make you happy and change your life. The portrayals of both fit and healthy adults and children easily participating in physical activity (mainly dancing) in this commercial also promise health and do not address the consequences of eating large amounts of sugary cereal, most notably obesity.

In this commercial, reality has been altered. Add to this the fact that this is only one example out of 75 that were viewed for this study and it’s clear how powerful the alteration of reality has become in food advertising. In other words, whether it’s sugary cereal, yogurt with sugar or concentrated fruit juice, or bread with sugar, the reality and consequences of eating too much of these things has been altered. By including portrayals of healthy, active adults and children in ultra-processed food commercials, the consequences of eating these foods are all but annihilated.

Smiling Tummy

While very few yogurt commercials address the unpleasant side effects of overeating, they all do so when offering their products as solutions. For example, the 2014 Dannon Activia “*Smiling Tummy*” ad featuring Laila Ali shows the former professional boxer and daughter of Muhammad Ali talking to viewers saying: “*There’s nothing like leaving home feeling attractive but too many times I feel bloated, gassy, uncomfortable with gurgling.*”⁵⁷ During this time, she is shown trying on various outfits in front of a mirror and looking unhappy even distressed. She continues by saying, “*Nothing seems to feel right and yet another pile of clothes on my bed*” and is shown tossing a clothing item on her already full bed.⁵⁸ She tells viewers that she is taking the Activia Challenge and that “*When your tummy smiles things just feel right.*”⁵⁹ During this time, she is shown in a vibrant red dress with a sparkling smile over her stomach and looking very happy at her image in the mirror. At the end of the ad, she encourages viewers to take the Activia Challenge.

⁵⁶ *Chocolate Frosted Flakes TV Spot, ‘Mmmm Chocolate’*. [online]. [2022-09-11]. Available at: <<https://www.ispot.tv/ad/d1XH/chocolate-frosted-flakes-mmmm-chocolate>>.

⁵⁷ *Activia TV Spot, ‘Smiling Tummy’ Featuring Laila Ali*. [online]. [2022-09-11]. Available at: <<https://www.ispot.tv/ad/7jDi/activia-smiling-tummy-featuring-laila-ali>>.

⁵⁸ *Ibidem*.

⁵⁹ *Ibidem*.

It's worth noting that Activia yogurt, like most other yogurt brands, lists cane sugar as the second ingredient. Cane sugar is extracted from the sugarcane plant and, though less processed than white table sugar is still a highly addictive substance for those physically addicted to sugar as well as a very sweet taste that triggers a neurological reward system in the brain of even those who have normal eating patterns. According to Amy Reichelt, BrainsCAN Research Associate, Western University, "*When we eat sweet foods the brain's reward system — called the mesolimbic dopamine system — gets activated. Dopamine is a brain chemical released by neurons and can signal that an event was positive. When the reward system fires, it reinforces behaviours — making it more likely for us to carry out these actions again. Dopamine "hits" from eating sugar promote rapid learning to preferentially find more of these foods.*"⁶⁰

As Reichelt points out, even those who are not eating disordered experience cravings for sugar-filled foods, "*in the case of sweet foods, this means we need to eat more to get the same rewarding feeling — a classic feature of addiction*".⁶¹ Couple this with the pervasiveness of advertising and the promotion of food as a means of emotional change and/or relief of emotional discomfort and the dangerous psychology of encouraging eating disorders becomes clear.

4 Discussion

The practice of using Binge Eating Disorder behaviors to promote unhealthy foods can be dangerous especially when taking into consideration the extremely high and growing obesity rate and past research noting the power of food advertising to influence eating behaviors. According to the World Health Organization, "*1.9 billion adults, 18 years and older, were overweight. Of these over 650 million were obese*".⁶² It is not unreasonable to assume a link between the promotion and passive acceptance by consumers of binge eating disorder behaviors in food advertising and the drastic obesity crisis in the U.S. Most notably, this means that those who are eating disordered are repeatedly through various appealing images and words being shown how eating certain foods, most of which are high in sugar, can change their lives while normal eaters who are biologically wired to seek out sweet foods⁶³ are also sent the same message thus creating the potential for both populations to develop BED or, at the very least, become overweight.

This is particularly alarming considering that 100% of the advertisements in this study included portrayals of using food to relieve emotional discomfort and seek emotional change and 99% contained representations of deep emotional attachment to food, both of which are classic characteristics of addiction. Furthermore, the pervasiveness of advertising in American society, makes avoidance of these messages impossible, which only adds to the widespread promotion of unhealthy eating behaviors in society. As Jhally notes, "*advertising is impossible to avoid*" and "*corporations now spend more than \$200 billion a year on advertising in the U.S. alone, a figure that's greater than the total GDP of many countries*".⁶⁴

Additionally, Bandura's social learning theory and Potter's discussion of the "*unconscious effects of advertising*" that "*(...) gradually over time (...) alter our standards, our perception of needs, and our expectations of life*" by "*showing us that we can change our attractiveness, body image, smell, whiteness of smile, relationships, self-image, and degree of happiness by*

⁶⁰ REICHELT, A.: *The Impact Sugar Really Has on Your Brain*. [online]. [2022-09-11]. Available at: <<https://halifax.citynews.ca/local-news/the-impact-sugar-really-has-on-your-brain-1876806>>.

⁶¹ Ibidem.

⁶² *Obesity and Overweight*. [online]. [2022-09-11]. Available at: <<https://www.who.int/news-room/fact-sheets/detail/obesity-and-overweight>>.

⁶³ REICHELT, A.: *The Impact Sugar Really Has on Your Brain*. [online]. [2022-09-11]. Available at: <<https://halifax.citynews.ca/local-news/the-impact-sugar-really-has-on-your-brain-1876806>>.

⁶⁴ JHALLY, S. (Director): *Advertising at the Edge of the Apocalypse*. [DVD]. Northampton, MA : Media Education Foundation, 2017.

using certain products”⁶⁵ to the educational nature of the media in general and food advertising specifically. As Potter further notes advertisements “can alter our perceptions of what is real”⁶⁶ meaning that viewers of these commercials can grow to believe that the foods advertised can and will provide them with emotional change and solace thus increasing the dangers of an already serious public health crisis.

Alternative Reality

Another point worth noting is the absence of consequences in the commercials viewed for this study. For example, there was only one portrayal in each of the following categories: (B4) Evidence of frequently checking the mirror for body flaws; (E4) Portrayals of feeling uncomfortable eating around others; and (P4) Portrayals of weight fluctuations. Additionally, 3% of the ads contained (E5) Representations of negative feelings about body weight/size/shape while 4% of the ads included (E2) Indicators of feelings of guilt, shame, embarrassment, disgust with eating; and (E3) Evidence of distress before or after eating. All these patterns reflect the consequences of eating disorders, food addiction and overeating. The fact that they are absent from commercials, of course, makes sense from a marketing perspective where highlighting the benefits of a product is a powerful sales technique. Yet, from media literacy viewpoint, this exemplifies Potter’s “alternative reality” concept. This is evident as it relates to the ads in this study, all of which send the “alternative reality” message that eating sugary, high calorie food has no health consequences.

It is this symbiotic relationship between the “alternative reality” messages in food advertisements and the increased pervasiveness of advertising that perpetuates the increasing rise in the obesity rate. The promotion of eating high calorie foods without consequences and the existence of ads to remind consumers how delicious these foods are have created a climate of denial which ultimately contributes to unprecedented obesity-related health consequences. If left unrestricted the promotion of binge eating disorder behaviors in food advertisements has the potential to create entire generations of obese children within a matter of decades thus crippling health care systems nationwide.

Not only do these BED portrayals in food advertising have the potential to greatly affect healthy-eating perceptions, but they also have the potential to alter perceptions of reality to the point of dramatically increasing the number of BED sufferers as well as those who are overweight. A recent study noted that “more than \$1 trillion per year in health-related costs [are] paid by Americans, with an estimated \$604 billion of that attributable to diseases — such as hypertension, cancer and diabetes — linked to diet”.⁶⁷ The portrayal of BED behaviors in food advertising has the potential to greatly increase this figure to the point of bankrupting the American health care system if action is not taken to regulate the messages presented in food advertisements.

Conclusion

Based on the results of the current study, it can be concluded that breakfast food advertisements, specifically cereal, yogurt and bread ads, use a large number of Binge Eating-Disorder behaviors to promote their products. This is evidenced by the fact that there were 355 BED behaviors presented in the 75 advertisements studied, which translates into an average of approximately 5 BED behavior portrayals per commercial. It can be further concluded that breakfast food advertisements contain few portrayals of the actual health dangers in consuming these products.

⁶⁵ POTTER, W. J.: *Media Literacy*. Los Angeles, CA : Sage, 2019, p. 402.

⁶⁶ Ibidem.

⁶⁷ REILEY, L.: *The Total Health and Climate Consequences of the American Food System Cost Three Times as Much as the Food Itself*. [online]. [2022-09-10]. Available at: <<https://www.washingtonpost.com/business/2021/07/16/true-cost-of-american-food-system/>>.

This is evidenced by the low number of portrayals showing the consequences resulting from eating large amounts of these foods, including (B4) checking the mirror for body flaws (1%), (P4) portrayals of weight fluctuations (1%), (E5) negative feelings about body weight/size/shape (3%), (E3) evidence of distress before or after eating (4%), and (E2) feelings of guilt, shame, embarrassment, disgust with eating (4%).

It is recommended that future studies include of a larger number and variety of food advertisements. Some of these items may include food items more suited to lunch and/or dinner such as hot dogs, packaged pasta or rice mixes, canned soups, or bottled sauces. Future studies may also seek to examine advertisements for desert foods such as ice cream, cookies, or other snack foods. Comparison of ads for these types of foods to the current study would provide additional information about the techniques used to food. It is also recommended that future studies examine causal relationships between food advertisements and BED behaviors.

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Appendix

Product	Gender	Date	Label	Link
Cheerios – Block Party	Adult - F Voice/ Food Animation	2018	A1, A3, A5, P1	https://www.ispot.tv/ad/d2Cp/cheerios-block-party
Cheerios – Good Goes Round	M/F – all ages	2018	A1, A3, A5	https://www.youtube.com/watch?v=6Z51hdZ2cdl
Cheerios – Learning to Eat Cheerios	Adult – F Baby	2018	A1, A3, A5	https://www.ispot.tv/ad/7Vgs/cheerios-learning-to-eat-cheerios
Cheerios – Gluten-Free Violet	Adults – M/F Children – M/F	2017	A1, A3, A5, B1, B2, B3, P1, P3	https://www.ispot.tv/ad/Ad1A/cheerios-gluten-free-violet
Cheerios – One Gram of Sugar	Food Animation	2014	A1, A3, A5	https://www.ispot.tv/ad/71A0/cheerios-1-gram-of-sugar
Honey Nut Cheerios – To the Honey	Adults – M/F Children – M/F	2019	A1, A3,	https://www.ispot.tv/ad/lZm2/honey-nut-cheerios-to-the-honey
Honey Nut Cheerios – Dancing Remix	Adults – M/F Children – M/F	2018	A1, A3, A5, B1, B3, P1	https://www.ispot.tv/ad/wCLr/honey-nut-cheerios-dancing
Honey Nut Cheerios – Rollercoaster	Honey Bee	2019	A1, A3, P1	https://www.ispot.tv/ad/d78N/honey-nut-cheerios-roller-coaster
Honey Nut Cheerios – Fuel the Fun	Food Animation	2018	A1, A3, A5, P1	https://www.ispot.tv/ad/wQmy/honey-nut-cheerios-fuel-the-fun
Honey Nut Cheerios – Dancing Dads	Adults – M Children – F	2016	A1, A3, A5	https://www.ispot.tv/ad/ANHD/honey-nut-cheerios-dancing-dads
Frosted Flakes – New Drone Great!	Adult – M Children M/F Tony Tiger	2019	A1, A3, A5, B1	https://www.ispot.tv/ad/lb2B/frosted-flakes-new-drone-great
Frosted Flakes – New Trick	Adult – M Children – M/F Tony Tiger	2019	A1, A3, A5, B1	https://www.ispot.tv/ad/lB1A/frosted-flakes-new-trick

Chocolate Frosted Flakes – Mmmm Chocolate	Adult – M Children – M/F Tony Tiger	2018	A1, A3, A5, E1, P1, P3, B1, B3	https://www.ispot.tv/ad/d1XH/chocolate-frosted-flakes-mmmm-chocolate
Frosted Flakes – Pregame Rituals	Children – M/F Tony Tiger	2016	A1, A3, A5, B5	https://www.ispot.tv/ad/7hMr/frosted-flakes-little-league-pregame-rituals
Frosted Flakes – Show Your Stripes	Children – M/F Tony Tiger	2013	A1, A3, A5, P2	https://www.ispot.tv/ad/7wBs/frosted-flakes-show-your-stripes
Honey Bunches of Oats – Breakfast Time With Dad	Adults – M Children - F	2019	A1, A2, A3, A5, B1, B2	https://www.ispot.tv/ad/IVJD/honey-bunches-of-oats-breakfast-time-with-dad
Honey Bunches of Oats w/ Almonds - Diana	Adults – M/F	2019	A1, A3, B1, P1	https://www.ispot.tv/ad/dWYa/honey-bunches-of-oats-diana
Honey Bunches of Oats - Outtakes	Adults – M/F	2018	A1, A3, B1, P1	https://www.ispot.tv/ad/dEFj/honey-bunches-of-oats-outtakes
Honey Bunches of Oats with Almonds - Troops	Adult – M Children - M	2019	A1, A3, A5	https://www.ispot.tv/ad/IV54/honey-bunches-of-oats-troops
Honey Bunch. Oats w/ Almonds – Spoon, Bowl, Action	Adults – M/F	2018	A1, A3, A5, B1, P1, P3	https://www.ispot.tv/ad/dWmU/honey-bunches-of-oats-with-almonds-spoon-bowl-action
Cinnamon Toast Crunch Churros – For Anytime	Animated Food Characters Child – Voice Only	2019	A1, A2, A3, A4, A5, B2, B3, E1, P1, P2	https://www.ispot.tv/ad/l6RM/cinnamon-toast-crunch-churros-when-ever
Cinnamon Toast Crunch – Cinna-Milk Mountain	Animated Food Characters Adult – F – Voice Only	2018	A1, A3, A4, A5, E1, P1, P2	https://www.ispot.tv/ad/IH7Y/cinnamon-toast-crunch-cinna-milk-mountain
Cinnamon Toast Crunch – Science Teacher	Adult – M Children – F/M	2019	A1, A2, A3, A4, A5, E1, P1, P2	https://www.youtube.com/watch?v=c5_2scEAHas
Cinnamon Toast Crunch – Concert	Food Characters Adult – F – Voice Only	2018	A1, A3, A4, A5, B3, E1, P1, P2	https://www.tvcommercialad.com/watch/AHAsYCsZpsOKHq7
Cinnamon Toast Crunch – Squares vs. Squares	Food Characters – Adult – F – Voice Only	2019	A1, A3, A4, A5, E1, P1, P2	https://abancommercials.com/cinnamon-toast-crunch/squares-vs-squares-ad-commercial/58787/
Chobani Greek Yogurt – Wonderful World of Less	Adults – F/M	2019	A1, A2, A3, B1, B3, E1, E2, P1	https://www.ispot.tv/ad/lpux/chobani-less-sugar-greek-yogurt-wonderful-world-of-less-song-by-rosco-gordon
Chobani Gimmies – Coming To Our Town	Adults – M/F Children – M/F	2019	A1, A2, A3, A4, E1, P1, P3	https://www.ispot.tv/ad/IFge/chobani-gimmies-coming-to-our-town
Chobani Gimmies – Cotton Candy Queen	Children – F	2019	A1, A3, B1	https://www.ispot.tv/ad/IFx3/chobani-gimmies-cotton-candy-queen
Chobani Gimmies – To All The Moms Out There	Adult – F Child – M (dressed as female)	2019	A1, A3, A4, A5, P1	https://www.ispot.tv/ad/IHVv/chobani-gimmies-to-all-the-moms-out-there
Chobani Less Sugar Greek Yogurt – Less Technology	Adult – M and F Voice Only	2019	A1, A2, A3, A5, B1, E1, E3	https://www.ispot.tv/ad/lpNc/chobani-less-sugar-greek-yogurt-less-technology

Dannon Activia Show Your Gut Some Love	Adults – F Voice Only plus other gut body parts	2019	A1, A3, A5, B1, E5, P5	https://www.ispot.tv/ad/lnLh/dannon-activia-show-your-gut-some-love
Dannon Activia Healthy Routine Feel My Best	Adults – F Children – M/F	2018	A1, A3, A5, B1, P5	https://www.ispot.tv/ad/dtUo/dannon-activia-probiotic-dailies-healthy-routine-feel-my-best
Dannon Activia Exceptional Taste	Adult – F Voice Only	2017	A1, A3, P5	https://www.ispot.tv/ad/AmFS/dannon-activia-exceptional-taste
Dannon Activia Digestive System Issues	Adults – M/F Children – M/F	2015	A1, A3, A5, B1, B3, E3, P1, P2, P5	https://www.ispot.tv/ad/74rE/activia-challenge-digestive-system-issues
Dannon Activia Smiling Tummy	Adults – F and M Voice Only	2014	A1, A3, A5, B1, B4, E3, E5, P4, P5	https://www.ispot.tv/ad/7jDi/activia-smiling-tummy-featuring-laila-ali
Yoplait Oui Upside Down Spoon	Adults – F/M	2019	A1, A3, A5	https://www.ispot.tv/ad/l2al/oui-by-yoplait-and-yq-upside-down-spoon
Yoplait Oui Sea Salt Caramel Upside Down	Adults – F/M	2018	A1, A3, A5, B1	https://www.ispot.tv/ad/d6JY/yoplait-oui-sea-salt-caramel-upside-down
Yoplait Oui Impractical	Adult – F / M – Voice Only	2019	A1, A2, A3, A5, B1	https://www.ispot.tv/ad/d6hv/yoplait-oui-impractical
Yoplait Backseat	Adult – F / M Voice Only Children – M/F	2017	A1, A3, A5, B3	https://www.youtube.com/watch?v=IkWDz7eRcH4
Yoplait Mom	Adults – M/F Children – M/F	2017	A1, A3, A5	https://www.youtube.com/watch?v=fRclYOM1wEQ
Oikos Triple Zero Fuel Your Hustle	Adults – M	2018	A1, A3, B1, P1	https://www.ispot.tv/ad/wFeu/oikos-triple-zero-fuel-your-hustle-featuring-dak-prescott
Oikos Triple Zero Official Yogurt of Fuelling Your Hustle	Adults – F / M Voice Only	2018	A1, A3, A5, B1, P1	https://www.youtube.com/watch?v=cms05lcMarM
Oikos Triple Zero Official Yogurt of Fuelling Your Hustle (60 second)	Adults – M/F	2019	A1, A3, A5, B1, P1	https://www.ispot.tv/ad/lqVa/oikos-triple-zero-the-official-yogurt-of-fueling-your-hustle-featuring-dak-prescott
Oikos Nonfat Yogurt Drink Portable Life	Adults – M/F	2016	A1, A3, A5, B1, B3	https://www.ispot.tv/ad/ANCN/oikos-nonfat-yogurt-drink-portable-life
Oikos Triple Zero Protein Punch	Adults – M/F	2017	A1, A2, A3, A5, B1, P1	https://www.ispot.tv/ad/7HLU/oikos-triple-zero-protein-punch-featuring-cam-newton
Fage Yogurt Peace of Mind	Adults – F/F Voice Only	2018	A1, A3, A5, B1, B3, E2	https://www.ispot.tv/ad/w4zL/fage-yogurt-peace-of-mind
Fage Yogurt Right	Adults – M/F Voice Only	2018	A1, A3, A5, B1	https://www.ispot.tv/ad/w4N4/fage-yogurt-right
Fage Yogurt Good Karma	Adults – F/F Voice Only	2018	A1, A3, A5, B1, B3	https://www.ispot.tv/ad/w4Ma/fage-yogurt-good-karma
Fage Yogurt Total Split Cup Everything You Want	Adults- M/F Children - M	2018	A1, A2, A3, A5, B1, B3, P1	https://www.ispot.tv/ad/dlur/fage-total-split-cup-everything-you-want
Fage Yogurt Plain Extraordinary	Adults – F/F Voice Only Child – F	2019	A1, A3, A5, P1	https://www.youtube.com/watch?v=KZHIOwBnZk
Thomas' Breakfast	Children - M	2019	A1, A3, A4, A5	https://www.youtube.com/watch?v=sksDBPLqsj4

Thomas' Breakfast Swappin In	Adult – F Children F	2019	A1, A2, A3, A4, A5, B1	https://www.youtube.com/watch?v=1MmpQtph0uU
Thomas' Pulled Pork Eggs Benedict	Adult – F – Hand Only	2017	A1, A3, A5, P1	https://www.youtube.com/watch?v=EAhZNRrGik
Thomas' Breakfast Toppings	Adult – F/ Voice and Body Only	2019	A1, A3	https://www.youtube.com/watch?v=GjkiQXHXGM
Thomas' Breakfast Butter Tub	Adult – F	2019	A1, A3, A5	https://www.youtube.com/watch?v=Pbd2QRFW1E
Wonder Bread Power of Softness	Adults – M/F Children – M/F	2018	A1, A3, A5, B1, P3	https://vimeo.com/260064835
Nature's Own Perfectly Crafted	Adults – M/F	2018	A1, A3, A5, E1, P1, P3	https://www.facebook.com/NaturesOwnBread/videos/10155455280595936/?v=10155455280595936
Nature's Own Tradition	Adult – F Children – M/F	2019	A1, A3, A5, E1, P1	https://www.youtube.com/watch?v=8l0WHNXtiYE
Nature's Own Compassion	Adults – M/F Child – M	2019	A1, A3, A5	https://www.youtube.com/watch?v=oJW9hECMEFs
Nature's Own Inspiring Creativity	Adults – M/F Children – M/F	2018	A1, A3, A5, B5	https://www.youtube.com/watch?v=Y06fcdHNYE
Pepperidge Farm Raisin Cinnamon Swirl (3 sec.)	No People	2019	A1, P2	https://www.facebook.com/PepperidgeFarm/videos/440335486699149/
Pepperidge Farm Respect the Bun Grill Off (7 sec.)	No People	2019	A1, A3, P1	https://www.facebook.com/PepperidgeFarm/videos/446746482821900/
Pepperidge Farm Cinnamon Swirl Baked French Toast	Hands Only	2019	A1, A3, A5	https://www.facebook.com/PepperidgeFarm/videos/330712957645533/
Pepperidge Farm First Day of Spring (3 sec.)	No People	2019	A1, A3, P1	https://www.facebook.com/PepperidgeFarm/videos/311885259520031/
Pepperidge Farm Chef Kaylee Farmhouse Hearty White Bread	Adult – F Children – M/F (photos)	2019	A1, A3, A5, P1	https://www.facebook.com/PepperidgeFarm/videos/247760186127170/
Healthy Life Breakfast Toast 9 Ways	Adult – F (hands only)	2019	A1, A3, P1	https://www.facebook.com/officialgoodful/videos/2618573731546410/UzpfSTIxMDl0Nzk5NTEwNToxMDE2MTYwMjU5MzlyNTEwNg/
Arnold Oatnut Bread No Added Nonsense	Adult – F Children – F	2019	A1, A3, A5, B1, P1	https://www.ispot.tv/ad/IP6N/arnold-oatnut-bread-no-added-nonsense
Wonder Bread America the Wonderful Sandwiches	Adults – M Children – M/F	2018	A1, A3, A5, B1	https://www.facebook.com/WonderBreadUSA/videos/1631410646927571/
Wonder Bread America the Wonderful Cookout	Adults – M/F Children – M/F	2018	A1, A3, A5, P1	https://www.facebook.com/WonderBreadUSA/videos/1631408163594486/
Wonder Bread Wonder-ful Holidays	Adult – F (Hands Only) Child – F	2017	A1, A3, A5, B1	https://www.facebook.com/WonderBreadUSA/videos/1177353085666665/
Dave's Killer Bread Organic English Muffins	No People	2019	A1, A3	https://www.youtube.com/watch?v=Lahkqc1Nxxg4

Dave's Killer Bread Activate Your Awesome (6 sec.)	No People	2019	A1, A3	https://www.facebook.com/DavesKillerBread/videos/2281797615236045/?v=2281797615236045
Sara Lee Artesano Build Something Better	Adult – F Voice Only	2018	A1, A2, A3, P1	https://www.ispot.tv/ad/wc7e/sara-lee-artesano-build-something-better
Sara Lee Artesano Bread More to Love	Adult – F Voice Only	2018	A1, A2, A3, P1	https://www.ispot.tv/ad/IFvF/sara-lee-artesano-bread-more-to-love
Sara Lee Classic White Bread Soft and Fluffy	Adult – F Children – M	2019	A1, A2, A3, A5, B1, B2, E4, P3	https://www.ispot.tv/ad/oVMO/sara-lee-classic-white-bread-soft-and-fluffy

TABLE 1: Food Addiction Advertising Analysis Raw Data

Source: own processing, 2022.

BED Advertising Analysis Chart	
Label	Description
Addictive	
A1 – 100%	Signs of using food to relieve emotional discomfort/seek emotional change
A2 – 17%	Evidence of neglecting daily responsibilities due to eating
A3 – 99%	Representations of deep emotional attachment to food
A4 – 12%	Indicators of doing anything to obtain food/inability to control cravings
A5 – 75%	Portrayals of using food to replace relationships or as a means of bonding
Behavioral	
B1 – 47%	Images of eating alone
B2 – 7%	Signs of stealing, hiding, or hoarding food
B3 – 16%	Portrayals of frequent dieting/appetite control/grazing throughout the day
B4 – 1%	Evidence of frequently checking the mirror for body flaws
B5 – 3%	Signs of food rituals (won't let foods to touch, only eating red candy, etc.)
Emotional	
E1 – 15%	Portrayals of feeling out of control with regard to food
E2 – 4%	Indicators of feelings of guilt, shame, embarrassment, disgust with eating
E3 – 4%	Evidence of distress before or after eating
E4 – 1%	Portrayals of feeling uncomfortable eating around others
E5 – 3%	Representations of negative feelings about body weight/size/shape
Physical	
P1 – 47%	Representations of large amounts of food
P2 – 11%	Indications of eating quickly
P3 – 9%	Signs of difficulty concentrating due to food presence/thoughts
P4 – 1%	Portrayals of weight fluctuations
P5 – 7%	Indicators of stomach/gastrointestinal distress/complaints
<p>**Adapted for food advertising analysis using information from <i>Diagnostic and Statistical Manual of Mental Disorders (DSM-5)</i>, the Food Addiction Institute, and the National Eating Disorders Association.</p> <p>© Debbie Danowski, 2019</p>	

TABLE 2: Food Addiction Advertising Analysis Result

Source: own processing, 2019.

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