

## A Content Analysis on the Nutritional Portrait of the Breakfast Cereal Television Advertisements<sup>1</sup>

### Televizyon Reklamlarında Yer Alan Mısır Gevreği Ürünlerinin Besin Değerleri Üzerine Bir İçerik Analizi

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**ÖZ:** Çocukluk obezitesi gelişmiş ve gelişmekte olan ülkelerde yaşayan milyonlarca çocuğu etkilemeye devam etmektedir. Araştırmalar, obeziteye temel oluşturan faktörlerden birinin televizyonda yayınlanan çocuklara yönelik yiyecek/içecek reklamları olduğunu göstermiştir. Özellikle Amerika Birleşik Devletleri gibi çocukluk obesitesinin yaygın olduğu ülkelerde, toplum baskısının sonucu olarak çocuklara yönelik yiyecek reklamlarının düzenlenmesi gündeme gelmiştir. Bu çalışmada Birleşik Devletler televizyonlarında yayınlanan 1600 saatten fazla program içeriğinden ayıklanan mısır gevreği reklamlarının çocuklara sunduğu yiyecek maddelerinin besin değerleri analiz edilmiştir. Mısır gevreği reklamlarının seçilmesinin sebebi bu reklamların içeriklerinde sağlıklı ve dengeli bir sabah kahvaltısını göstermek zorunda olmalarıdır. Sonuçlar bu reklamlarda görülen sağlıklı kahvaltuların kalori değerlerinin olması gerekenden çok yüksek olduklarını göstermiştir. Bulgular çocuklara yönelik yiyecek içecek reklamlarının içeriklerinde yer alan sözde sağlıklı imajların çocuk obezitesinin önlenmesine katkısının olmadığına işaret etmektedir. Araştırmanın bir amacı da çocukluk obezitesinin önlenmesi konusunda okul öncesi öğretmenlerine televizyon reklamlarının içeriklerinin aileler ve çocuklar tarafından anlaşılması konusunda düşen büyük sorumluluğa dikkat çekmektir.

**Anahtar sözcükler:** Çocukluk obezitesi, yiyecek reklamları, medya okur-yazarlığı.

**ABSTRACT:** Childhood obesity and related health problems are affecting millions of children worldwide. Recent studies indicate that food/beverage TV commercials are one of the contributing factors of rising obesity rates. In the States, where the obesity rate is high, there has been a public outcry for more stringent rules regulating food related TV ads. This study investigates breakfast cereal ads which were derived from more than 1600 hours of television programming. Cereal ads were selected for this investigation particularly because they have to include an image of healthy, balanced breakfast. The results of analysis shows that these so-called healthy images of breakfast have little or no impact in terms of preventing childhood obesity since these images portray a very calorie-rich breakfast. One of the aims of this study to point out the great responsibility of the early childhood teachers in terms of assisting parents' and children's understanding of the commercial intent.

**Keywords:** childhood obesity, food advertisements, media literacy

## 1. INTRODUCTION

The purpose of this study is to examine the health disclaimers featured in breakfast cereal commercials broadcasted in American televisions in order to investigate whether these disclaimers accurately depict a “healthy” and “balanced” breakfast. A systematic analysis of the content of cereal commercials were conducted to determine the actual nutritional information presented in the commercials and in the health disclaimers featured in these commercials. Over 1600 hours of television programming was analyzed to generate a sample of 924 breakfast cereal commercials. The findings should offer better understanding of how children process health related disclaimers embedded in food commercials and lay the ground work for a comparative study between the United States and Turkey in regards to food advertisements and the policies regulating the advertisement industry.

<sup>1</sup> Bu çalışma kısmen yazarın doktora tezinden yararlanılarak yazılmıştır.

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### **1.1. Rise of the Childhood Obesity Epidemic**

Childhood obesity, a growing problem for the last couple of decades, has recently become a hot button issue in most of the industrialized countries (Doak, Visscher, Renders, & Seidell, 2006; Flegal, Tabak, & Ogden, 2006; Ogden, Carroll, Curtin, McDowell, Tabak, & Flegal, 2006; WHO, 2006). The terminology used in defining obesity and overweight varies depending on the source. Defining obesity, some researchers emphasize the existence of excessive adiposity (or body fat) and its distribution in the body (Cline, Spradlin, & Plucker, 2005; Wardley, Puntis, & Taitz, 1997; Endres, Mense, & Rockwell, 2004), while other sources focus on a child's weight in relation to his/her height (American Academy of Pediatrics, Committee on Nutrition, 2003; Centers for Disease Control and Prevention, 2007; Harper, 2006). According to the American Academy of Pediatrics, a child with a body mass index (BMI) at or above the 95th percentile for age and gender should be considered as obese or overweight. Children whose BMI is between 85% and 95% are at risk of being overweight (American Academy of Pediatrics, Committee on Nutrition, 2003). BMI is calculated as weight in kilograms divided by the square of height in meters. There are different BMI values set for each age group and gender. For example, an eight-year old boy with a BMI number of 18.44 is considered overweight. The same age child with a BMI 21.60 is considered as obese (Binns, 2007).

### **1.2. Television Viewing and Its Contribution to Childhood Obesity**

Even though the usages of interactive media like the internet and video games have increased dramatically in the last few years (Valkenburg, 2004), television is still a very popular medium amongst young children (Lemish, 2007). This popularity is mainly due to its accessibility and simplicity of use. The images presented are easily understandable and unlike printed media, children do not have to learn how to decode a complex system of symbols (reading) to enjoy the medium (Huston, Zillman, & Bryant, 1994). A majority of children get their nutritional knowledge by watching television (Harrison, 2005). The American Obesity Association identifies television viewing as one of the "modifiable causes" of childhood obesity (American Obesity Association, 2002). The American Association of Pediatrics recommends that parents should limit their children's television and video usage to no more than two hours a day (American Academy of Pediatrics, 2006). Literature has shown television's profound effect on children's food choices (Harrison, 2005). Studies conducted in the 1980s showed that even short term exposure to television can influence young children's food preferences (Gorn & Goldberg, 1982).

### **1.3. Advertising to Young Children**

Television advertising targeting young children has been a topic of public interest since the early 1970s (Kunkel & Gantz, 1992). Research has shown that food advertisements broadcasted during children's television programming are a major contributing factor to childhood obesity since they have a significant influence on children's food preferences (Committee on Food Marketing and the Diets of Children and Youth, 2006; Lobstein & Dobb, 2005; Signorielli & Staples, 1997; Story & French, 2004). In the United States, the current self-regulatory system governing food advertisements has been drawing a great deal of criticism from scholars and public advocacy groups who find it ineffective and/or outdated at best (Campbell, 1999; Lazar, 1994; Minow & LaMay, 1995). There is a growing public concern about how food advertisements targeting young children should be regulated yet there is little data on children's cognitive process of the messages given by the food advertisements (Livingstone, 2005). Some child advocacy groups have been pushing for more stringent rules (Lazar, 1994). Radical solutions like completely banning advertisements for children under a certain age have been proposed (Cross, 2002; Ruskin, 2004; Wootan, 2003). The advertisement industry and manufacturers have acknowledged the problem of childhood obesity and the need for more

research on creating advertisements appropriately tailored to the cognitive abilities of children (National Advertising Review Council, 2004).

Children are considered as a “special audience” and they are assumed to be vulnerable to the persuasive tone of advertisements due to their cognitive immaturity (Huston, Zillman, & Bryant, 1994). The biggest concern critics voiced against TV advertisements targeting young children is the possibility of young children’s inability to comprehend the “intent of sale” in the commercials they viewed (Committee on Food Marketing and the Diets of Children and Youth, 2006; Kunkel & Gantz, 1992). Some scholars have claimed children younger than six years of age have limited power to resist temptation when they see something they want like a sugary snack on a television commercial (Valkenburg, 2004). Valkenburg (2004) pointed out: “If they see something attractive, they focus all their attention on the enticing aspects of this stimulus and find it very difficult to resist” (p. 87).

#### **1.4. Sugared Breakfast Cereal Ads**

Cereals are among the top food items advertised to children and adolescents in the United States. In one of the earlier studies, Barcus (1981) reported that 80% of all ads broadcasted during children’s programming fall under one of the four product groups: toys, cereals, candies, or fast food restaurants. Thirty-four percent of these ads are for cereal products. Kunkel and Gantz (1992) reported that out of 10325 commercials they analyzed in their extensive content analysis study, 22.4 % of the commercials were cereal commercials which was the second largest group following toy advertisements. The findings of the latest study on food advertisements from the Kaiser Family Foundation (Gantz, Schwartz, Angelini, & Rideout, 2007) revealed similar results with the earlier content analysis studies. Gantz and his colleagues found out that breakfast cereals are the second largest food group being advertised to children (28%), closely following candy and snacks (38%). The same study also reported that cereal commercials are most frequently appear during children’s shows (31%).

## **2. METHODOLOGY**

A content analysis of 38 health disclaimers depicting a healthy/balanced breakfast that featured in cereal commercials during children’s television programming broadcasted between May-September 2005 was conducted. Content analysis, in simple terms, “is a systematic method of analyzing message content” (Severin & Tankard, 2001, p.35). Babbie (2007) provides another, perhaps a more in depth definition of this research method as a “study of recorded human communications and well suited to answering questions such as who says what, to whom, why, how, and with what effect? ”(pg. 320). Other scholars such as Berelson (1952) define the content analysis as a method for gathering quantitative data about “a manifested content of communication” (pg. 18). Overall, the literature show that the content analysis method has been frequently used by researchers who examine the nature of food and beverage advertising to children (Byrd-Bredbenner & Grasso, 1999; Harrison & Marske, 2005; Gantz, Schwartz, Angelini, & Rideout, 2007; Kuribayashi, 2001; Kunkel & Gantz, 1992).

The two important functions of content analysis research, according to Van Evra (2004), are “to provide important information on the nature of the content to which children and adolescents are exposed” (p. 31) and to offer valuable data regarding the periodical changes that occur in the content over time.

### **2.1 Unit of Analysis: A Disclaimer**

For coding purposes, a disclaimer in a breakfast cereal commercial is defined as the part of the program where the image of a “healthy breakfast” (the product surrounded by a number of

other food items) is shown while a voice over claims that the particular cereal “is part of ‘a healthy, balanced’, ‘this complete’ breakfast.

## 2.2 The Sample

The sample used in this study was extracted from a larger sample collected by the investigators who conducted the research for the 2007 Kaiser Family Foundation report on food advertisement in the United States (Gantz, Schwartz, Angelini, & Rideout, 2007). The researchers who conducted that study collected a composite week (the content representing one week, collected in different days throughout a three-month period) of television programming from 13 most watched networks based on data provided by the Nielsen Media Research (Gantz et al, 2007). Six of these networks were commercial broadcast networks (ABC, CBS, Fox, NBC, WB, and UPN). The other six were commercial cable networks (ABC Family, BET, The Cartoon Network, Disney, MTV, and Nickelodeon). The remaining network, PBS categorized in the study as "a non-commercial broadcast network" (p.20).

In all, the sample included in the Kaiser Family Foundation study consist of a total of 1638 hours of programming, containing 8,854 food and beverage advertisements making it one of the largest ever conducted in this area. A sub-sample of 744 breakfast cereal commercials drawn from the Kaiser Study sample was used in this study.

## 2.3 Data Preparation

The sample content of 1638 hours of television programming was received in digital format stored in DVDs (see Gantz et al., 2007 for detailed information regarding the initial recording of these DVDs). Each DVD contained 3-hours of programming. In the primary analysis phase, 744 cereal commercials were identified from the primary sample of 8,854 food related advertisements that the researchers of the Kaiser Family Foundation Report had previously investigated (Gantz et al., 2007). These commercials had been previously identified as appeared during television shows targeting children between the ages of two to twelve years old by the investigators of the aforementioned study. Since many commercials appeared numerous times during different programs in different channels, 744 commercials were reviewed in order to identify the unique commercials within the recorded television content. As a result of this reviewing process, the researcher was able to identify, extract and store 41 unique breakfast cereal commercials from the initial sample of 744.

In the second part of the data preparation, each of the 41 unique cereal commercials were reviewed in order to identify the health disclaimers featured in these commercials. When found, a screenshot of the healthy breakfast as it appeared in the disclaimer was taken by using software that allows the user to take screenshots of individual video frames. These screenshots were stored in the corresponding folders like the commercial videos were during the first stage of the primary analysis. These snapshots were later used to identify the food items depicted in the breakfast disclaimers for the nutritional analysis. In the 41 unique commercials, 38 of them featured a disclaimer about a healthy/balanced breakfast. The remaining three, even though appeared during children's programming did not contain any disclaimer and were in violation of the self-regulatory policy of the food commercials.

In the final part of the data preparation, the nutritional information of each cereal promoted in the sample commercials was obtained from the manufacturers' websites. Each manufacturer publish the nutritional information of their cereals in their web sites in a form of image file consist of the nutrition facts label and the ingredients lists as it can be seen on the side of a cereal box (see figure 4).

## 2.4 Measuring a “Healthy” Breakfast

The Nutrition Facts Label, a standardized food labeling system developed by U.S. Food and Drug Administration (USFDA, 2006) was used to determine the nutritional categories to be assessed in this study. The Nutrition Facts Label was used previously in two studies investigating the nutritional content of foods advertised during children’s programming (Harrison & Marske, 2005; Kuribayashi, Roberts, & Johnson, 2001). According to the Nutrition Facts Labeling system, serving size, energy/calories (kcal), total fat (g), saturated fat (g), cholesterol (mg), sodium (mg), total carbohydrate (g), dietary fiber (g), sugars (g), and protein (g) are the main nutritional categories that must be included on the labels for eligible foods (USFDA, 2006). Therefore these nutrients were included in the analysis as variables.

Three dietary guidelines were utilized in assessing the 'healthiness' of the breakfasts depicted in cereal commercials. The School Breakfast Program guidelines (Menu Planning in the School Breakfast Program, 2006) provided the recommended intake values for calories, total fat, saturated fat and protein. The Dietary Reference Intakes (IOM, 2005, 2006) were used in conjunction with USDA's Dietary Guidelines for Americans (USDA, 2005) in order to determine the recommended intake values for the remaining nutrients that are included in this study. The recommended nutritional values for the nutrients cholesterol (mg), sodium (mg), total carbohydrate (g), dietary fiber (g), sugars (g) were extrapolated from the data available in these two guidelines. In addition, the SBP guidelines were utilized in conjunction with the Dietary Guidelines for Americans to determine the variety of food groups that should be included in a balanced breakfast.

## 3. RESULTS

A total of 744 breakfast cereal commercials which had been classified as targeting children and teens in the Kaiser Family Foundation report of food advertising on television (Gantz, Schwartz, Angelini, & Rideout, 2007) were viewed. Of these, commercials of 41 unique sugary breakfast cereal products were identified. Of the 41 commercials, 3 did not include a disclaimer, bringing the sample for the study to 38 unique commercials. Fifteen of these commercials promoted products manufactured by the General Mills Company; 15 commercials were for Kellogg's products; Post brand cereals were represented by 5 commercials, and 3 commercials advertised Quaker Oats brand cereals.

### 3.1 Analysis of the Major Nutrients in the Depicted Breakfasts Featured in the Disclaimers

#### Calories

For this study the ideal levels of calories for the two age groups (three to five and eight to six) were set based on USDA's School Breakfast Program (SBP). According to SBP, preschool children should consume 388 kilocalories from breakfast while for older children an ideal calorie intake for breakfast is 544kcal/breakfast (Menu Planning in the School Breakfast Program, 2006). If children eat the breakfast that is portrayed as healthy and balanced in the disclaimer portion of the cereal advertisements in this study, they will consume an average of 476.3 kilocalories. In 84% (n=32) of the commercials analyzed in study (n=38) a typical breakfast portrayed in the disclaimer contains more than 400 kcal of calories. Moreover, one in every five (n=8, 21.1%) breakfasts depicted in the cereal commercials supply more calories than it is recommended for older children (544 kcals per breakfast). In a few advertisements, the



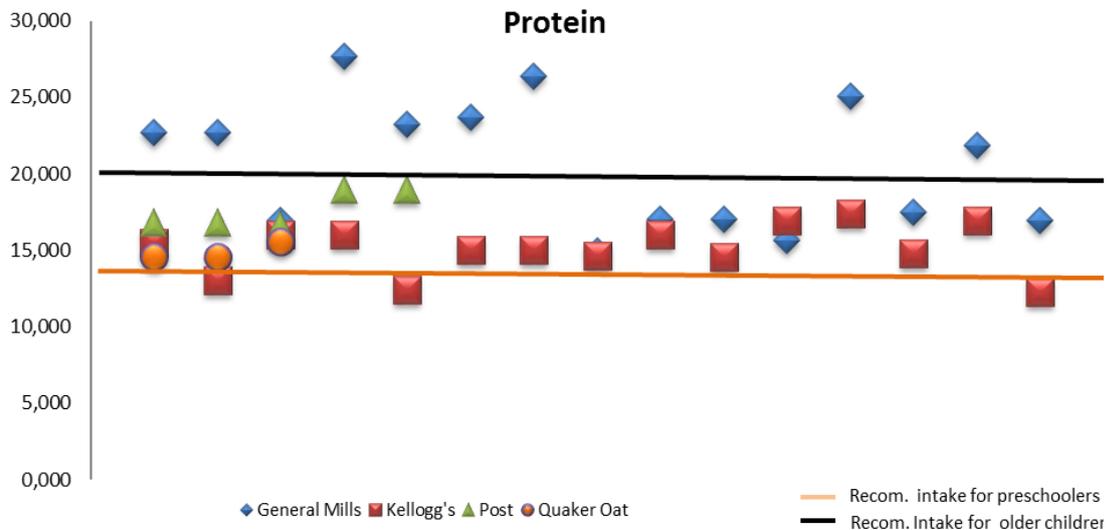


Figure 2. The distribution of the protein nutrient within the sample by the product manufacturer.

Total Fat

Based on the data provided in both SBP and IOM Dietary Reference Intake system, the depiction of breakfast items containing no more than 13 grams of total fat at the 388 kcal level (for preschoolers) and 18 grams of total fat at the 544 kcal level (grades K-12) were considered as healthy in this study.(Whitley & Rolfes, 2002). The average nutritional value for total fat presented in a typical breakfast cereal commercial is 8.5 grams per breakfast. This is below the acceptable levels set by APA (8.62g for 388kcal, 12g for 544 kcal ) and DRI (10.7g for 388kcal, 15.1 for 544 kcal). In fact, 58 percent of the breakfast commercials analyzed in this study (n=22) featured disclaimers that portrayed a breakfast containing less than 8.62 grams of total fat. On the other hand, 37% (n=14) of the health disclaimers included in this study depicted a breakfast containing more than 13 grams of total fat, exceeding the limit set by SBP at the 388 kcal level

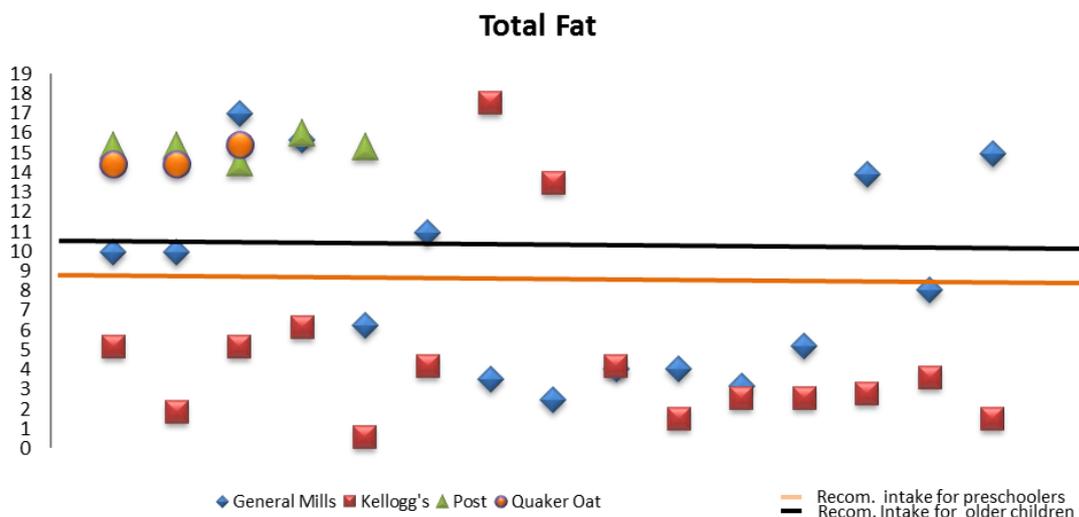


Figure 3. The distribution of the total fats within the sample by the product manufacturer.





Saturated Fat

The data from dietary guidelines translates to a saturated fat intake of 3.3 g per breakfast for preschoolers and 4.6g per breakfast for older children. While 18% (n=7) of the disclaimers in this study depicted a breakfast exceeding the recommended saturated fat intake value for preschoolers, none of the breakfasts portrayed in the disclaimers contained more than the recommended saturated fat intake for older children. Commercials produced by General Mills (2g), Kellogg's (1.3g), and Post (3.3) portrayed breakfasts that contain saturated fat well within the recommended levels for children of all ages.

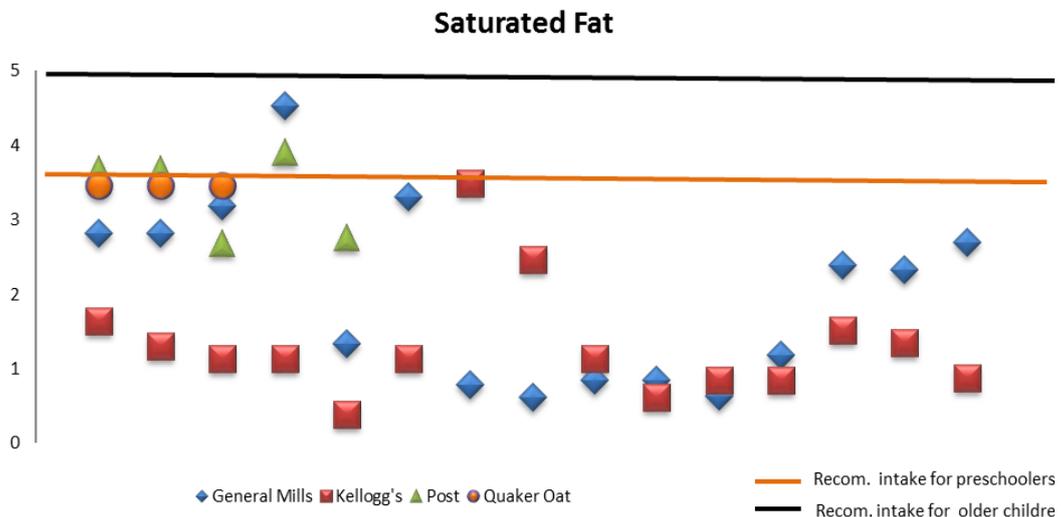


Figure 7. The distribution of saturated fats within the sample by the product manufacturer.



breakfasts with an average of 488.4 mg, while General Mills brand cereal ad disclaimers contained the most sodium with an average of 750.5 mg. Commercials produced by Post (614mg) and Quaker Oat (718.8mg) also portrayed breakfasts high in sodium content.

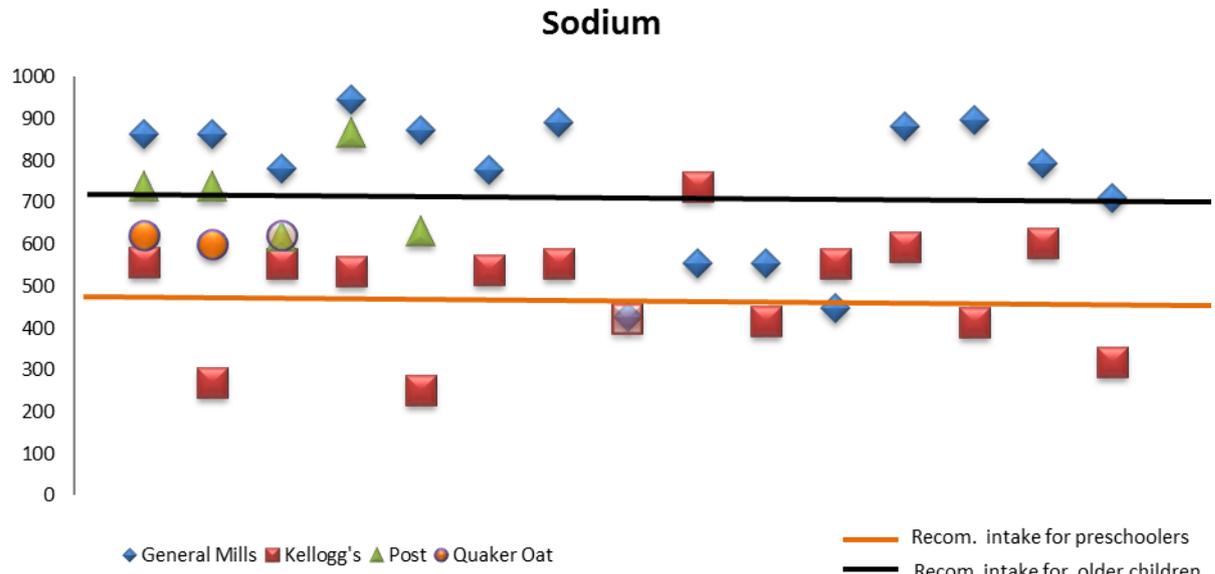


Figure 9. The distribution of sodium nutrient within the sample by the product manufacturer.

### 3.2 Representation of Different Food Groups in the Depicted Breakfasts Featured in Disclaimers

According to the Dietary Guidelines for Americans (USDA, 2005), one of the key aspects of consuming a healthy diet is to establish a balance of selections from the different food groups while staying within the recommended energy intake limits. Children who watch cereal commercials will see uniform, almost identical representations of a breakfast. Besides cereal, the most common food items featured in the disclaimers are milk (100%), toast (60%), orange juice (58%), and orange (26%). The commercials analyzed for this study showed 23% of the disclaimers featured two or more servings of fruits and 31% include three or more servings of grains. On the other hand, there was no representation of vegetables, vegetable juice, meat or meat alternatives, cheese, eggs, yogurt, nuts or nut/seed butters (e.g. peanut butter or almond butter) as recommended in the SBP guidelines.

## 4. DISCUSSION

### 4.1 Interpretation of the Results Regarding the Nutritional Information Presented in the Disclaimers

The 1975 NAB Television Code required cereal commercials targeting children to include disclaimers indicating that the cereal is one part of a healthy balanced breakfast and that an image of a healthy and balanced breakfast be displayed to properly inform young viewers. As research has provided more information about nutrients and their effects on human development,

better, more improved dietary guidelines have been designed to provide the public with the most effective information strategies to maintain a healthy diet. In response to growing public concern regarding the childhood obesity epidemic, the USDA recently revamped the existing dietary guidelines in an attempt to offer solutions, more suitable to the nutritional needs of young children.

#### **4.2 Age Difference**

Children's nutritional needs vary greatly at different ages. The three sources of dietary guidelines that were used in this study to benchmark the nutritional information provided by the disclaimers, defined age groups differently when setting a recommended level for each nutrient. For example, the School Breakfast Program recommends two different calorie intakes and adjusted serving sizes for preschool age children and older children. The Dietary Guidelines for Americans (USDA, 2005), assigned different calorie intakes based not only on age, but also on gender and physical activity levels. According to these guidelines, a 1000 kcal daily energy intake can be adequate for a three year-old child who lives a sedentary life style, while an active eight year-old requires twice as much energy from food consumption. Analysis of the major nutrients included in the food items portrayed in the disclaimers showed, for the most part, that the breakfasts depicted in the disclaimers are suitable for the dietary needs of older children but exceed the needs of younger children. Eighty-four percent (n=32) of the disclaimers analyzed contained more than 400 kcal, thus exceeding the recommended calorie intake for preschool age children; only one in every five (n=8, 21.1%) breakfasts depicted in the disclaimers supplied more calories than recommended for older children (544 kcals per breakfast). Similarly, nearly nine out of every ten breakfasts (n=33, 86.8%) that appeared in the disclaimers contained more carbohydrates than recommended for younger children, while only 34% (n=13) exceed the recommended intake for older children.

These findings indicate that the disclaimers are designed for children eight years and older who live an active lifestyle in mind. Given that these commercials are broadcasted during a variety of children's programming, including programs watched by very young viewers, production of a variety of disclaimers that portray differing versions of healthy breakfasts suitable to the dietary needs of different ages of children should be considered.

Part of the problem may stem from the possibility that the USFDA's Nutrition Fact Label system is the only dietary reference taken into account during the preparation of the disclaimers. Designed for the consumers who want a quick reference point when shopping, the values on the Nutrition Fact Label are set to a 2000 kcal/daily diet. Therefore, utilizing only the Nutrition Facts Label when preparing disclaimers results in neglecting the dietary needs of a wide range of viewers. In future productions, differences in nutritional needs should be taken into account, since the target audience for cereal commercials includes younger and less active children.

#### **4.3 Inclusion of Food Groups**

The USDA recommends that all individuals should include all the food groups in their diets since different foods provide different nutrients to the body (USDA, 2005). The Dietary Guidelines for Americans present a body of evidence indicating the health benefits of including a variety of food groups in one's diet. Consuming adequate amounts of fruits and vegetables helps protect against certain types of chronic diseases (such as certain types of cancers, type 2 diabetes), while including more grains into the daily diet may improve cardiovascular health. Similarly, a balanced consumption of milk and milk products have been said to help developing bone mass (USDA, 2005).

Examination of disclaimers in breakfast cereal commercials revealed that children who watch these commercials are exposed to representations of a breakfast that is quite standardized and unvarying in terms of the food items provided. The lack of representation of important

nutrients such as vegetables, vegetable juices, meat or meat alternatives, certain dairy products (i.e. cheese, yogurt) or nuts in all of the commercials examined in this study, underlines an important oversight, as these food groups are recommended as part of a healthy and balanced diet. Including the food groups described above in the breakfast image featured in disclaimers would be in the best interest of young children.

#### **4.4 Distribution of the Major Nutrients in the in the Depicted Breakfasts**

The breakfasts depicted in the disclaimers were examined for the inclusion of nine major nutrients: calories, protein, total fat, carbohydrates, sugars, dietary fiber, saturated fat, cholesterol, and sodium. The results were compared with the recommended levels set by three major dietary guidelines: the USDA School Breakfast Program, USDA Dietary Guidelines for Americans, and IOM Dietary Reference Intakes. The findings illustrate that the breakfasts shown during the disclaimers do not necessarily demonstrate a healthy and balanced breakfast. Most of the disclaimers examined in this study depicted a breakfast high in energy, sugar, and sodium.

Figures 10.1 and 10.2 clearly illustrate the percentage of each nutrient analyzed in this study in regards to compliance with dietary guidelines for children between the ages three to five and six to eight. As shown in the figures, the disclaimers failed to meet the recommended nutritional levels in five out of nine categories. There was insufficient data to make comparison for sugars. This issue is further discussed below.

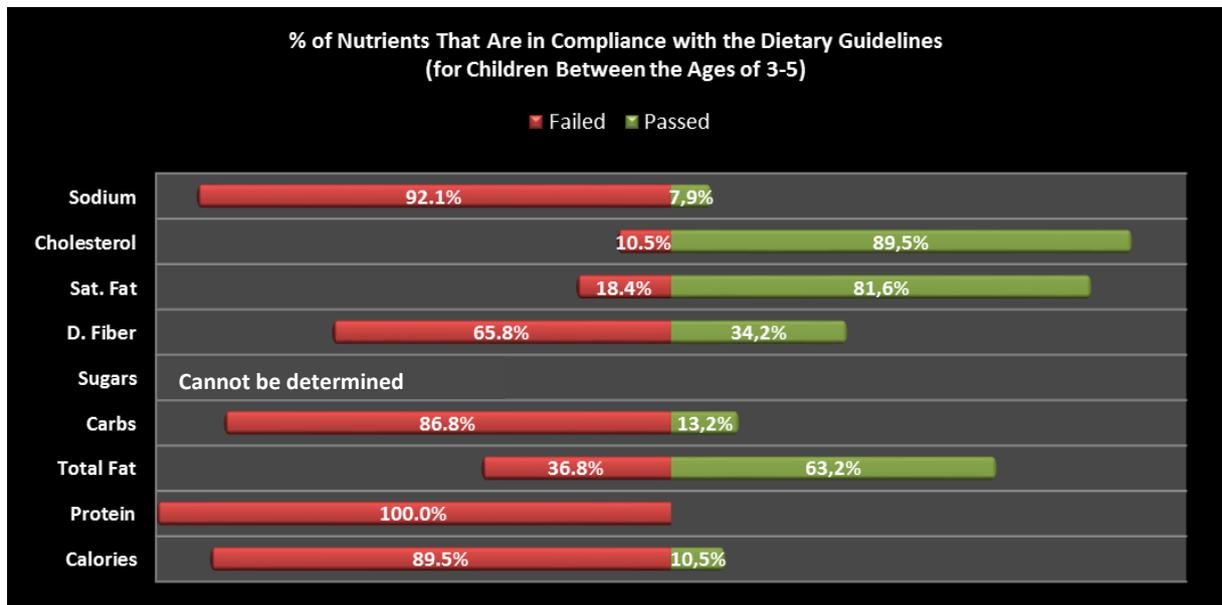


Figure 10.1. The percentage of each nutrient analyzed in this study in regards to compliance with dietary guidelines for children ages three to five.

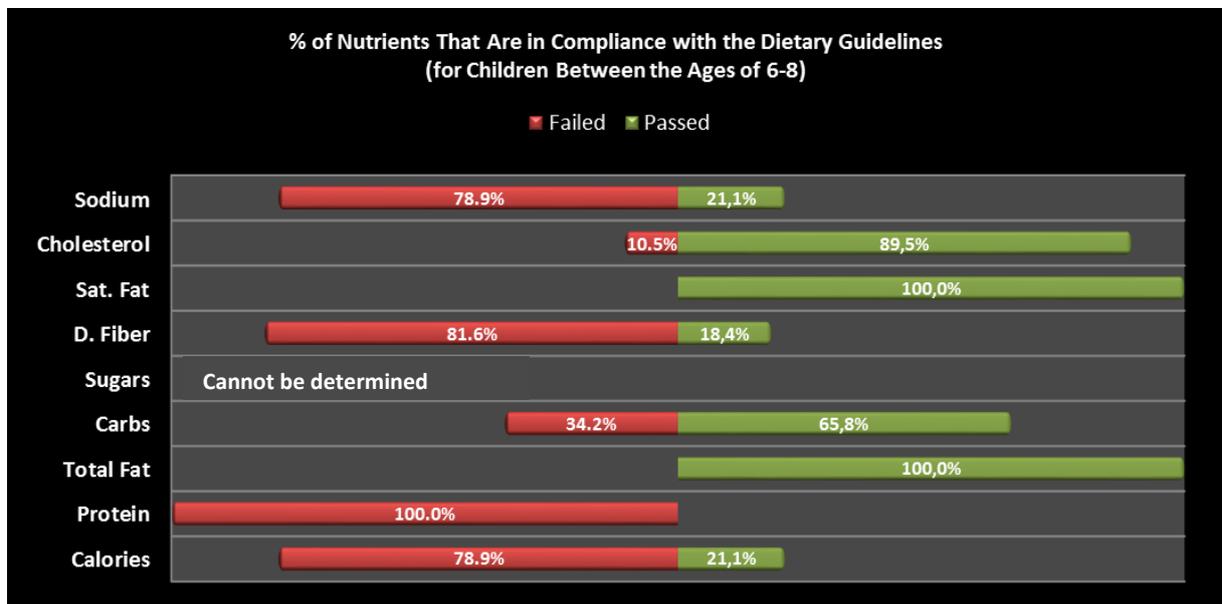


Figure 10.2. The percentage of each nutrient analyzed in this study in regards to compliance with dietary guidelines for children ages six to eight.

Examination of the content revealed that cereal commercials typically portray an energy rich breakfast. As shown in figures 10.1 and 10.2, the majority of breakfasts depicted in the disclaimers exceeded the recommended levels in calories, carbohydrates, and proteins. All of these nutrients significantly contribute to energy intake (Samour and King, 2005; USDA, 2005). Although the nutrients in the sugary cereals depicted were the biggest contributor to this situation, the composition of the remaining food items depicted also affected the high energy levels. Protein rich food items such as margarine or butter (which were always coded as margarine), toasts and pancakes which are full of carbohydrates, and sugary food items such as jams and muffins were frequently observed and coded during the investigation.

According to dietary guidelines, any conscious effort to eliminate bad carbohydrates in children's diet should focus on the inclusion of food items that are high in dietary fiber (USDA, 2005). Low obesity rates have been reported in societies with high dietary fiber consumption (Kleinman, 2004). The analysis of the health disclaimers featured in cereal commercials revealed that a majority of the disclaimers exhibited a breakfast poor in dietary fiber content. Food items that are rich in dietary fiber such as raspberries, figs, dates, broccoli, black beans, pinto beans, and bananas (USDA, 2005) almost never show up in these disclaimers. In addition, ready-to-eat bran cereals, which are recommended in dietary guidelines as a source of dietary fibers (Kleinman, 2004; USDA, 2005) are rarely advertised to children. The cereals examined in this study contributed an average of 1.074 grams of dietary fiber to children's breakfast while providing an average 155.6 kcal energy. One medium orange, on the other hand, provides 3.1 grams of dietary fibers while containing only 62 calories.

As discussed in the earlier section, obesity occurs when there is an imbalance of consumed and spent calories (Doak, Visscher, Renders, & Seidell, 2006; Harper, 2006; Wardley, Puntis, & Taitz, 1997). Therefore, it is crucial for children to learn about the low-energy breakfast alternatives. Many scholars recommended that avoiding carbohydrate and protein rich foods while including fresh fruit and vegetables into the diet will help children get the necessary energy for their growth without the danger of over consuming calories (IOM, 2006; Kleinman;2004; USDA, 2005). The disclaimers portraying a healthy/balanced breakfast should reflect this reality.

As noted in the results section, the USFDA's Nutrition Facts Label System only requires manufacturers to list total sugar for the food items on the food labels without separating added sugars from natural sugars (USFDA, 2004; USDA, 2005). The USDA recommendations regarding sugars only concern the added sugar intake since DRI values for natural sugars have not yet been set due to lack of scientific evidence (IOM, 2005; Dietary Guidelines for Americans, 2005; IOM, 2006; Ottten, Hellwig, and Meyers, 2006 ).

Thus, even though all of the cereals examined in this analysis were sugary in nature and contained large amounts of added sugar, because the amount of added sugar was not listed separately from natural sugar on the product labels, it is impossible to determine whether the total sugar values found in the analysis are dangerous to children's health or not. Unless there is a policy change regarding this issue, all future research will suffer from the same limitation.

Analysis of the disclaimers also showed that the majority of the breakfasts portrayed met the recommended levels of saturated fat, total fat, and cholesterol at both age levels. The main reason for the low level of fat content appears to be the lack of high-fat food items such as eggs, meat, poultry and dry beans (USDA, 2005) depicted in the breakfast menus rather than a deliberate attempt to meet the dietary guidelines.

The USDA's Dietary Guidelines for Americans acknowledge the role of fats and oils in a healthy diet, however, individuals are cautioned about the possibility of heart diseases that can occur with excessive fat intake (USDA, 2005). Thus, rather than eliminating food items rich in

fat content, producers should focus on portraying a balanced combination of food groups that contribute different nutrients to a healthy diet.

Many scientists warn the public that excessive sodium intake can lead to high blood pressure and coronary diseases (IOM, 2006; USDA, 2005; Whitney and Rolfes, 2002). Scientists are particularly concerned because surveys show that many Americans are already consuming more sodium than the recommended levels (IOM, 2006; USDA, 2005). The nutritional analysis of the disclaimers revealed that 92% of the breakfasts portrayed consist of food items that provide more than the recommended levels of sodium for preschoolers; almost 80% of these breakfasts contain more sodium than recommended for older children.

Roughly 30% of this high sodium is contained in the cereals (an average of 170.5 g of 632 g total). The remaining 70% comes from food items such as toast (up to 4 slices), pancakes, muffins, and margarine. Further efforts should include collaboration with nutritionist in order to determine lower sodium breakfast alternatives to present in the disclaimers.

Overall, the nutritional analysis of the content showed that the breakfasts portrayed as healthy and balanced in the disclaimers do not reflect the nutritional composition of a healthy and balanced breakfast as recommended by the dietary guidelines. The breakfasts depicted in the disclaimers are high in energy, sugar, and sodium. Further analysis showed that although the cereals themselves contributed significantly to these totals, selection of other food items that contained high levels of certain nutrients, resulted in depictions of breakfasts that provided inadequate levels of nutrients for children.

The results also indicate that children who watch these commercials are exposed to a very standardized, unvarying representation of a breakfast mainly consist of the same food items with very little difference between commercials. This lack of diversity in the breakfast table, just like in societies, leads to imbalance in representation. The review of the commercials showed that in the disclaimers, certain nutrients are over represented, while some others, though their roles in a healthy diet as much important, do not get to be seen by children.

Early childhood educators could use the major findings of this research to initiate a discourse with the parents regarding the advertisements and their effects on children's diet. This research can pave the way for many classroom activities in which the early childhood professionals facilitate children in critically examining the messages they are exposed to on a daily basis. Most importantly, early childhood teachers can use the findings of this study as a leverage point in their demands to include media literacy in early childhood education curriculum.

This study was part of a PhD. dissertation thesis. Due to the growing public interest to the issue of the childhood obesity, new developments regarding the regulation of the television advertisements of the food items to children occurs almost on a daily basis; re-forming the format and content of these commercials. Therefore, as recommended by many scholars, it is important to conduct similar analyses on a regular basis to capture the most accurate picture of the healthy, balanced diet represented to children in the television commercials.

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## Geniş Özet

Çocukluk obezitesi gelişmiş ve gelişmekte olan ülkelerde yaşayan milyonlarca çocuğu etkilemeye devam ederken yakın zamana yaygın bir görüş olan “tombul çocuk’ sağlıklı çocuk demektir” inancı yavaş yavaş tarihe karışmaktadır. Araştırmalar, obeziteye temel oluşturan faktörlerden birinin televizyonda yayınlanan çocuklara yönelik yiyecek/içecek reklamları olduğunu göstermiştir. Televizyonun günde iki saatten fazla seyredilmesi özellikle erken çocukluk döneminde bulunan çocukların metabolizmasını yavaşlatmakta; buna ek olarak televizyon programları arasında yayınlanan çocuklara yönelik yiyecek/içecek reklamlarına maruz kalan küçükler sağlıklı besinler yerine içlerinde boş karbonhidrat ve yağ bulunan şekerli besinleri tercih etmektedirler. Özellikle Amerika Birleşik Devletleri gibi çocukluk obesitesinin yaygın olduğu ülkelerde, toplum baskısının sonucu olarak çocuklara yönelik yiyecek reklamlarının düzenlenmesi gündeme gelmiştir.

Bu araştırmada Amerika Birleşik Devletleri televizyon kanallarında yayınlanan 1600 saatten fazla program içeriği analiz edilmiştir. Yapılan ön analizde ilk olarak araştırmanın evrenini oluşturan ve önceden kayıt edilmiş 1684 saat televizyon programı içerisinde bulunan 40000’den fazla reklam arasından 8,844 yiyecek/içecek reklamı seçilmiştir. Daha sonra bu reklamların 744 tanesinin mısır gevreği ürünleri reklamları olduğu tespit edilmiştir. Mısır gevreği reklamlarının seçilmesinin sebebi reklamcılık kuralları gereği bu reklamların içeriklerinde sağlıklı ve dengeli bir sabah kahvaltısını göstermek zorunda olmalarıdır. Bu reklamlar taranarak 38 adet birbirinden farklı mısır gevreği ürününün reklamlarına ulaşılmıştır. Son olarak tespit edilen 38 farklı mısır gevreği ürünü reklamı çocuklara sundukları yiyecek maddelerinin besin değerleri analiz edilmiştir.

Araştırmada son örnekleme oluşturan 38 birbirinden farklı mısır gevreği reklamının içeriklerinde sunulan sağlıklı ve dengeli kahvaltı imajlarının besin değerlerinin kullanılmasında Amerikan Besin Değerleri Bilgi Etiketleri Sistemi (Nutrition Facts Labeling System) kullanılmıştır. Bu sistem Amerika Birleşik Devletlerinde satılan hemen hemen her besin maddesinin paketinde bulunmak zorunda olup takip eden bilgileri içermektedir: Porsiyon boyu, enerji/kalori (kcal), toplam yağ (gr), doymuş yağ (gr), kolesterol (mg), tuz (mg), toplam karbonhidrat (gr), fiber (gr), şeker (gr), ve protein (gr).

Reklamının içeriklerinde sunulan sağlıklı ve dengeli kahvaltı imajlarının besin değerlerinin saptanmasında ve bu değerlerin sağlıklı veya sağlıksız olarak sınıflanmasında üç farklı kıstas kullanılmıştır. Okul Kahvaltı Programı (The School Breakfast Program) Amerikan Tarım Bakanlığı (U.S. Department of Agriculture) tarafından geliştirilmiş federal bir program olup anaokulu ve ilköğretim düzeyindeki okullara kahvaltı sağlamaktadır. Okul Kahvaltı Programı bünyesinde ana sınıfları ve ilköğretim çağındaki çocukların kahvaltı sırasında tüketmeleri gereken besin değerleri konusunda oldukça kapsamlı rehberlere sahiptir. Özellikle kahvaltıda tüketilen Kalori, toplam yağ, doymuş yağ ve protein miktarlarının belirlenmesinde bu rehberlerden yararlanılmıştır. Kuzey Amerika kaynaklı kar amacı gütmeyen bağımsız bir organizasyon olan Institute of Medicine’in geliştirdiği The Dietary Reference Intakes (Besin Referans Girdileri) ve yine Amerikan Tarım Bakanlığı (U.S. Department of Agriculture) tarafından geliştirilen ve Birleşik Devletler’ in ana diyetetik rehberi olan Dietary Guidelines for Americans bu araştırmada kullanılan diğer besin değerlerinin (total karbohidratlar, sodyum, fiber gibi) erken çocukluk dönemi için ideal oranlarının belirlenmesinde rehber olarak kullanılmıştır. Dietary Guidelines for Americans rehberi aynı zamanda mısır gevreği reklamlarında gösterilen kahvaltı imajlarında bulunan yiyecek çeşitliliğinin belirlenmesi için kullanılmıştır.

Yapılan analiz mısır gevreği reklamları sırasında gösterilen sağlıklı ve dengeli kahvaltı imajlarının çocuklara sağlıklı bir kahvaltı seçeneği sunmadığını göstermektedir. Mısır gevreği reklamlarında yer alan sağlıklı ve dengeli kahvaltı görüntüleri 3-5 yaş ve 5-8 yaş grupları için ayrı ayrı incelenmiştir. Sonuçlar bu reklamlarda görülen sağlıklı ve dengeli kahvaltı tasvirlerinin pek çok besin maddesi için olması gerekenden çok yüksek değerler içerdiğini göstermiştir. Örneğin mısır gevreği reklamlarının %90'a yakını 3-5 yaş arası çocuklar için gerekenden fazla kalori içermektedir. Yapılan analiz aynı zamanda reklamlarda yer alan sözde sağlıklı ve dengeli kahvaltılar yediği farzedilen bir çocukğun diyetetik rehberlerde tavsiye edilenden daha fazla tuz tüketebileceğini göstermiştir. Araştırmada incelenen hemen hemen her besin değeri için hem 3-5 hem de 5-8 yaş grupları için durum aynı kalmakta, çocuklar reklamlarda önerilen kahvaltılarını tüketmeleri halinde bazı besin maddelerini sağlıklı olmayan düzeylerde almaktadırlar.

Amerikan televizyonlarında özellikle çocuklara yönelik programlar sırasında yayınlanan mısır gevreği reklamları içeriklerinde sağlıklı ve dengeli bir kahvaltının görüntülerini barındırmak zorundadırlar. Bu kahvaltı görüntülerinin bütününe bakıldığında çocuklara sunulan yiyecek seçeneklerinin kısıtlı olduğu göze çarpmaktadır. Reklamların çoğunda reklamı yapılan mısır gevreğinin yanı sıra hamur işleri, yağ ve reçel gibi besin maddeleri göze çarpmakta, erken çocukluk dönemi çocuğunun sağlığı için büyük önemi olan sebze, meyve, bakliyat gibi besin grupları çoğunlukla ihmal edilmektedir.

Bulgular çocuklara yönelik yiyecek/içecek reklamlarının içeriklerinde yer alan sözde sağlıklı imajların çocuk obezitesinin önlenmesine katkısının olmadığına işaret etmektedir. Mısır gevreği reklamlarının içerisinde betimlenen sağlıklı ve dengeli kahvaltılar küçük çocuklara yüksek kalori, tuz ve karbonhidrat içeren bir diyet sunmaktadır. Bu noktada erken çocukluk dönemi profesyonellerinin kendilerini medya ve çocukluk obesitesi arasındaki ilişki hakkında bilgilendirmeleri ve bu bilgiyi velilerle paylaşmaları çocukları bu çok önemli sağlık sorunundan koruyan önemli bir araç olabilir. Erken çocukluk eğitim ve bakımı alanında öğretmenler, çocukların obezite ile olan savaşlarında önemli bir kale haline gelmişlerdir. Öğretmenlerin medya okuryazarı haline gelmeleri ailelerin eğitimi ve çocukların sağlıklı beslenmeleri açısından önemli bir role sahiptir.

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