

# Chapter 1

## Introduction: Childhood Obesity: Media, Advertising, Community, and Advocacy

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Childhood obesity is a global public health problem. The prevalence of childhood obesity has reached epidemic proportions in the USA and in other nations around the world, including both developing and developed countries, particularly in regions where the adoption of Westernized food consumption and sedentary lifestyles are evident (World Health Organization (WHO), 2010). About 155 million children worldwide are classified as either overweight or obese (Hossain, Kavar, & El Nahas, 2007). According to the Centers for Disease Control and Prevention (CDC), the proportion of children (ages 2–11) and adolescents (ages 12–17) in the USA who are obese has increased threefold or more during the past three decades (Ogden & Carroll, 2010). Nearly one-third (32%) of children and adolescents over 2 years of age are either overweight or obese, where approximately 17% (or 12.5 million) of those are obese (Ogden, Carroll, Kit, et al., 2012). The obesity epidemic is nondiscriminating; it affects both boys and girls, across all states and socioeconomic lines and among all racial and ethnic groups, yet in disproportionate ways (Kumanyika & Grier, 2006; Ogden, Lamb, Carroll, et al., 2010; Singh, Kogan, & van Dyck, 2010; Wang & Zhang, 2006). Four out of 10 African-American and Mexican-American girls between the ages of 12 and 19 are considered overweight

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or obese (Ogden et al., 2012). Obesity prevalence is exacerbated among youth (ages 2–17) residing in economically distressed urban neighborhoods, in remote, isolated areas such as American-Indian reservations, and in areas of the Deep South and Appalachia, which includes the states of Mississippi, Georgia, Kentucky, and Louisiana, where concentrated poverty exists (Ogden, Lamb, et al., 2010; Singh et al., 2010; Story, Evans, Fabsitz, et al., 1999).

Obesity among children and adolescents imposes a debilitating economic strain on America's health care delivery system. In the USA alone, the annual cost of managing childhood obesity and obesity-related chronic diseases almost doubled, from \$126.9 million in 2001 to \$237.6 million in 2005 (Trasande, Liu, Fryer, et al., 2009). Moreover, food advertising and marketing are also costly but generate large revenues for food conglomerates and restaurant chains by recognizing the tremendous purchasing power of young consumers and their families. In 2006, the latest year for which data are available, US food, beverage, and restaurant companies spent \$1.6 billion to market youth-oriented products to children and adolescents, of which more than \$1 billion were spent on food advertising to America's teens and \$870 million on children under 12 years of age (FTC, 2008). Despite the considerable attention the epidemic has received, there remains many legal, methodological, and theoretical challenges confronting contemporary researchers who are interested in media effects on child development and health as well as creating interventions to minimize the health risks associated with childhood obesity.

*Advances in Communication Research to Reduce Childhood Obesity* is the first of its kind to date to comprehensively address some of the unanswered questions in the field, which critically delves into the importance of the use of new media technology (e.g., digital marketing, social media, and online applications) that may encourage food preferences and consumption patterns that potentially can lead to obesity. This volume represents a plethora of perspectives that challenge us to think outside the box about factors that are linked to unhealthy food and beverage consumption and obesity among young people. It creates a fresh platform for thinking about this richly dynamic phenomenon: it draws on new cutting-edge research, attends to global, legal, political, sociocultural, and other issues, and includes a special section on potential solutions to the pending crisis of childhood obesity.

The crux of this volume is to illuminate the role of media and its influences on childhood obesity, yet address legislative mandates, local initiatives, and corporate accountability efforts that may hinder or promote progress in reversing these alarming health trends. Several chapters provide discussions on how social environments in which young people spend most of their time—where they live, learn, and play—are major contextual influences that may impede or enhance a child's health trajectory. Each chapter discusses further directions in research, policy, and intervention that hold promise for reducing the prevalence of childhood obesity. In this broadly interdisciplinary book, experts from the fields of media studies, economics, health education, public health, and law come together to offer the first wide-ranging look at novel and innovative approaches aimed at improving children's health.

The proliferation of processed and unnatural food products, new media technology, and food marketing and advertising targeted to children is of concern to policy makers, industry, practitioners, and parents. Despite an unsuccessful effort to pass legislation in 2004 that would have authorized the Federal Trade Commission (FTC) to restrict food advertising to children, many used this time as an opportunity to spearhead their efforts by generating congressional reports, research articles, and other influential documents to illustrate the linkages between food advertising and obesity (e.g., McGinnis, Gootman, & Kraak, 2006). In 2005, the Institute of Medicine (IOM) of the National Academies underscored the need to address obesity impacting children and adolescents with a deeper understanding of the ubiquitous role the food industry plays in marketing and advertising calorie-dense foods and beverages, which cannot be overlooked as factors associated with the rise in obesity (McGinnis et al., 2006). A year later, in 2006, in response to the FTC and IOM call to action that industry do more to address advertising and childhood obesity, the Council of Better Business Bureaus (CBBB) launched the Children's Food and Beverage Advertising Initiative (CFBAI), which complements the existing National Advertising Review Council's Children's Advertising Review Unit (CARU), two self-regulatory programs to increase corporate social responsibility in the marketplace (CBBB, 2006; NARC, 2009). The CBBB is expected to provide direction, transparency, and accountability of participating companies in CFBAI who "pledged" to be more responsible for child-targeted advertising by improving basic nutrition standards for the food products they market and advertise which will potentially encourage healthier dietary choices. Participating corporations include many of the nation's largest food and beverage manufacturing companies, such as Kraft Foods, The Coca-Cola Company, General Mills, and McDonald's (CBBB, 2009; see also Chap. 6).

A third industry group, the *Sensible Food Policy Coalition*, was formed in response to the Obama Administration's Interagency Working Group (IWG)<sup>1</sup> with the intent of derailing the nutritional guidelines proposed by IWG which states that the food industry market food products to children which satisfy certain nutrition principles by 2016 (WHTF, 2010). Industry self-regulation is often encouraged by the FTC more so than government intervention largely because its ability to react more quickly and efficiently to consumer-related issues as well as reducing or eliminating the need for litigation against the food industry, which can be costly, time consuming, and counterproductive (Roller, Voorhees, & Lunkenheimer, 2006). Many advocate that government regulation is necessary to protect the consumer, while others oppose mandated industry practices since it would impede commercial speech.

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<sup>1</sup> The IWG reflects a coordinated effort among four federal agencies: FTC, CDC, US Department of Agriculture, and the Food and Drug Administration to create a set of guidelines for industry to adopt in their efforts to improve nutritious foods marketed to children and teens (White House Task Force on Childhood Obesity (WHTF), 2010).

## Childhood Obesity Defined

According to the World Health Organization, obesity is a disease and is defined as the condition of excess body fat to the extent to which health is impaired (WHO, 2000). Childhood obesity is determined by using an algorithm to calculate a Body Mass Index (BMI)<sup>2</sup> which measures body weight relative to height and is considered a valid indicator for estimating body fat.<sup>3</sup> The Centers for Disease Control and Prevention (CDC) and the American Pediatric Association (APA) recommend BMI measurements for children and adolescents between the ages of 2 and 19 which are age and gender specific to assess growth patterns. BMI is routinely calculated and plotted on the CDC 2000 BMI charts by health care professionals during annual well-child visits and physical exams to detect any abnormalities in weight status (Kuczmarski, Ogden, Guo, et al., 2002).<sup>4</sup> Children and adolescents are identified as “obese” if they are at or above the 95th percentile for their age and sex, and if they fall between the 85th and 94th percentiles are considered “overweight” (Ogden et al., 2012). National estimates based on data collected in the 1999–2010 National Health and Nutrition Survey (NHANES)<sup>5</sup> demonstrate that the prevalence of overweight (BMI ≥ 85th percentile) and obesity (BMI ≥ 95th percentile) among children and adolescents (aged 2–19) was 31.8% and 16.9%, respectively (Ogden et al., 2012). Non-Hispanic white children and adolescents had the lowest prevalence compared with their non-Hispanic Black and Mexican-American counterparts. African-American and Hispanic children and adolescents are more likely to be obese (39.1% each), compared to non-Hispanic whites (27.9%) (Ogden et al., 2012). Among 12- through 19-year-old boys, Mexican-Americans had the highest combined prevalence of overweight and obesity (46.0%). For girls in the same age group, non-Hispanic African-Americans had the highest prevalence of obesity compared to non-Hispanic whites (45.1% vs. 27.6%) (Ogden et al., 2012). With the exception of Hispanics, which consist of persons of any race, NHANES is limited regarding analyzing other ethnic and cultural groups due to insufficient sample size.

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<sup>2</sup> BMI is derived by dividing weight in kilograms by height in meters squared ( $BMI = \text{weight [kg]} / \text{height [m]}^2$ ), rounded to one decimal place.

<sup>3</sup> There are other body fat assessments, such as skinfold thickness measured at the abdomen, thigh, and chest areas, and girth measurements (hip and waist), yet BMI indices are customarily obtained prior to or in conjunction with other assessments (Dietz & Bellizzi, 1999).

<sup>4</sup> It is important to note that despite its low measurement error and good reliability and validity, BMI may not be a sensitive measure of body fatness in children who are particularly short, tall, or muscular. Hence two individuals can have the same amount of body fat yet have very different BMIs (Sardinha, Going, Teixeira, et al., 1999). There may also be racial differences in the relationship between the true proportion of body fat and BMI (Freedman, Wang, Thornton, et al., 2008).

<sup>5</sup> NHANES is a series of cross-sectional, nationally representative examination surveys conducted by the National Center for Health Statistics since the 1970s with the most recent survey conducted in 2009–2010. Data on weight and height were collected through direct physical examination in a mobile examination center (CDC, 2012).

Research on adults report that obesity prevalence is high among certain Asian Pacific Islanders and Native American groups, notably Samoans and Pima Indians, which underscore the need to examine overweight and obesity prevalence rates among children and adolescents of various ethnic subgroups (Kumanyika & Grier, 2006). To date, there are relatively few representative studies that have analyzed obesity among Native American and Asian and Pacific Islander children and adolescents (e.g., Story, Stevens, Himes, et al., 2003; Gordon-Larsen, Adair, & Popkin, 2003). Most of these, however, indicate that American-Indian youth tend to have higher obesity rates when compared to the national average (Story et al., 1999), while Asians tend to have relatively low rates of overweight when compared to other racial/ethnic groups (Kumanyika & Grier, 2006). There are also growing concerns of the pervasiveness of obesity among children and adolescents outside the USA Two chapters in this volume address this widespread trend in various Asian countries (see Chaps. 12 and 23).

The underlying causes for racial/ethnic disparities in childhood obesity are complex, yet efforts aimed at increasing our understanding of the contributing factors that importantly affect the racial patterning of the distribution of disease are essential. More research is needed to systematically delineate the multidimensional social concomitants of race and examine mediating factors and pathways through which demographic factors are associated with health and interact with each other (Williams & Collins, 1996; Williams, Mohammed, Leavell, et al., 2010). The diversity that exists within and across racial/ethnic populations requires further investigation since the prevalence of childhood obesity might substantially differ within certain subgroups, particularly in light of studies that have shown variations in obesity prevalence among adults.

The association between socioeconomic status (SES) and health outcomes has been observed for many years and documented in many countries (Krieger, Williams, & Moss, 1997). Unlike most Western European countries, SES is not systematically collected in national health studies in the the USA (Isaacs & Schroeder, 2004). SES has been found to be inversely related to higher BMI in adults, particularly among women (Hanson & Chen, 2007) but the evidence for children is inconsistent and remains less clear (da Veiga, da Cunha, & Sichieri, 2004). Most indicators of SES, such as education and income, are significantly patterned by race, with SES having a robust association with health (Williams & Collins, 1996). To date, only a handful of studies have examined the role of SES and obesity prevalence (e.g., Gordon-Larsen et al., 2003). A CDC report based on NHANES data show that low-income children are at greater risk of obesity when compared to children in nonpoor households (Ogden, Lamb, et al., 2010). One out of 7 low-income, preschool-age children is obese (CDC, 2011). Where you live is also a determinant of health. Features of neighborhoods or community-level factors are associated with the intersection of both racial and social dynamics. Evidence shows that ethnic minorities often bear the burden of high rates of obesity due to a disproportionate share residing in communities that are considered “toxic” environments (Ebbeling, Pawlak, & Ludwig, 2002).

## Why Are Children Becoming Obese?

Experts agree that poor diet and physical inactivity are major contributing factors with regard to the rise in childhood obesity prevalence, yet the determinants of obesity are multifactorial and cannot be characterized as the result of merely behavioral factors. There are social, ecological, and environmental influences that have contributed to the increase in the accessibility and availability of food products that are less than optimal, which is partly the result of marketing tactics that promote certain foods and beverages to America's youngest members. Much of the debate about what societal changes have occurred parallel to increased obesity among children and adolescents reflect some of the following:

- *Increased consumption of convenience foods:* An increased consumption and availability of low-cost, palatable, energy-dense poor nutrient foods and beverages that are high in saturated and *trans* fat, sodium, and sugars and low in vitamins; a shift in more meals eaten outside the home; proliferation of fast-food restaurants; larger food portions or “super-size” portions served both inside and outside the home.
- *Increase of food marketing aimed at children:* Food advertising exclusively to children and their families by fast-food restaurants and other types of restaurants is an increasing trend; companies market unhealthy foods to America's youth on television programs, radio, the Internet, through product placement in movies and video games, in schools that sell “junk” food and soda (i.e., calorie-dense, nutrient-poor foods), as well as on product packages.
- *Increased access to unhealthy foods in schools:* Foods and beverages that are available for purchase in schools through à la carte school stores or cafés and vending machines, commonly referred as “competitive foods” which are sold outside of the USDA federally approved breakfast and lunch meals and are typically high in fat, sugar, and sodium.
- *Reduced physical activity:* Physical education programs and recess have been substantially scaled back or eliminated altogether which has led to a decrease in physical activity in schools across the country. Disinvestment of recreational resources, such as parks and sports facilities, as well as concerns of safety may also prevent children and youth to engage in physical activity within their residential communities.
- *Increasing use of technology:* The amount of time spent watching television, playing video games, and using personal computers have been linked to the rising prevalence of childhood obesity as a result of becoming more sedentary.
- *Food Deserts:* More than 23.5 million Americans live in food deserts – communities with no access to fresh and nutritious food –where the closest supermarket or large grocery store is more than a mile away (USDA, 2009). Residents living in underserved neighborhoods or in remote, isolated rural areas are more inclined to have limited access to full-scale supermarkets that offer a variety of affordable, healthier food options, such as fresh produce and lean meats. Most residents typically rely on convenience stores, gas station quick marts, and other retail outlets that sell food products at higher prices and tend to be less nutritious.

The root causes of obesity among children and adolescents are quite complex. There are many explanations but the challenge lies on generating effective solutions to reduce this epidemic. Evidence suggests that a child's social milieu and interpersonal communication, such as peer groups, families, teachers, and doctors and dietitians influence the choices that children make with regard to satiety and dietary habits, all of which takes place in various contexts of their social and physical environments (i.e., child care centers, schools, community). Consequentially, these interactions can increase exposure and access to either healthy or unhealthy food choices. The impact of the media on childhood obesity has gained traction in a growing body of scientific research and has mitigated individual choices and actions. Some of these investigations have been methodically diverse and have had mixed findings. Use of new technologies and increased media consumption are important contributors to less than optimal diets and other obesity-related risk factors attributing to the rising rates of obesity among young Americans.

Changes in food manufacturing and processing, dietary habits, inactive and sedentary lifestyles, residential environments and school settings, industry tactics in advertising and marketing of food products to children, as well as family history and genetic susceptibility have been identified, yet how these factors interact among each other are not fully understood.

## Consequences of Childhood Obesity

Obesity has deleterious short-term and long-term consequences that may, in turn, diminish the quality of life. A body of evidence suggests that childhood obesity can be accompanied by other risk factors, such as chronic illnesses and diseases that may also carry over into adulthood and lead to premature deaths (Serdula, Ivery, Coates, et al., 1993; Dietz, 1998; Olshansky, Passaro, Hershow, et al., 2005). Until recently, children and adolescents are now being diagnosed with type 2 diabetes mellitus, elevated cholesterol, hypertension, and other comorbidities associated with obesity that were previously thought of as diseases of adults. Perhaps the most salient of these is type 2 diabetes mellitus, which now accounts for 45% of all new cases (WHO, 2008). In addition to adverse physical health consequences, obese children are also at risk of developing psychosocial problems, such as low self-esteem, depression, and social stigmatization (American Academy of Pediatrics, 2003). The consequences of obesity are further exacerbated as the result of living in communities that are more likely to have fewer opportunities to purchase affordable, healthy food choices, and less likely to have access to adequate social amenities and recreational resources to engage in physical activity. While obesity levels seem to have leveled off in recent years, projections indicate that if the epidemic continues it could potentially double among children and teens by 2030 (Ogden, Carroll, Curtin, Lamb, et al., 2010; Wang, Beydoun, Liang, et al., 2008).

## Organization of This Volume

This edited volume is comprised of 24 chapters which are divided into seven sections. Part I provides key issues on childhood obesity and an update on the progress made by private-sector (food companies) and public-sector stakeholders (i.e., government, school district boards, local school policies) since the 2006 Institute of Medicine (IOM) food marketing congressional report, which reflects a comprehensive analysis of 123 peer reviewed articles addressing links between food and beverage marketing practices on food preferences, consumption behavior, diet and health among American children and adolescents (McGinnis et al., 2006). The preponderance of evidence supported these links and hence an expert committee provided ten recommendations for a multisectoral, integrated effort to promote healthier diets and reduce the risk of childhood obesity. The IOM report concluded that its data establish a “need and an opportunity [to] ... turn food and beverage marketing forces toward better diets for American children and youth.” To what extent has any wide-ranging progress been made regarding implementing these recommendations since the IOM food marketing report was issued? Has there been much success in legislation enacted or initiatives generated by public and private stakeholders to achieve IOM’s recommendations?

In Chap. 2, Ellen Wartella and her colleagues summarize the significance of the IOM report and provide guidance on whether or not industry and government have adopted any effective initiatives in countering the increase in childhood obesity. In Chap. 3, Paul Harrison and Michaela Jackson introduce the concept of integrated marketing communications or IMC, which is widely used by food and beverage companies to market suboptimal food products that predispose children to higher risk of obesity and obesity-related health problems. The use of IMC practices to entice young people to purchase and consume certain products in the marketplace has garnered much attention in the USA and abroad. Emerging forms of marketing, such as viral marketing and product placements, are become increasingly popular especially with the increased use of the Internet and video games, along with other emerging technology such as social media (i.e., Facebook, YouTube, Twitter) among young people.

In Part II, investigators probe the regulatory efforts by the federal government and private companies concerning advertising and marketing tactics used by the food industry targeting young people and document legal and ethical issues concerning these practices. The ongoing debate of whether advertising is the real culprit in making our kids fat, which is an intriguing one, especially among those who claim that ultimately, it is the parents’ responsibility regarding making decisions about what is purchased and consumed by a minor. Should companies not produce food that is attractive or appealing to the palate or taste perceptions among young people? The truth is children *are* consumers of goods and products that reflect their needs and desires, similar to that of any other demographic group. The food industry spends billions of dollars on child-oriented advertising. Large-scale food advertising has a long history of incorporating various methods of persuasion



to sell products and promote brands to consumers. Minette (Meme) Drumwright and Jerome D. Williams introduce a provocative approach by exploring the role of ethics and other codes of conduct in food advertising through the perspective of three domains—industry, public health, and academia. Disentangling what is right, what is wrong, and any gray area in between in food advertising practices aimed at children is a complex proposition. Either one side of the argument or the other is evoked concerning whether child-oriented food advertising is ethical or not. Critics tend to either side against industry stating that it increases consumption of unhealthy products, while proponents argue that advertising is an important aspect of the economic system. In light of these ethical concerns, Samantha Graff and Tamara Piety elucidate the legal obstacles faced by regulators vis-à-vis commercial advertising directed toward children in the context of constitutional law, the First Amendment, and how this commercial speech doctrine has little relevance to the various tactics employed by advertising to encourage the purchase of unhealthy foods by children and their families.

The FTC regulates food advertising under its statutory authority to prohibit “deceptive or unfair” industry practices, yet some legal scholars and public health advocates argue that ads targeting children are inherently unethical and should be banned altogether or at the very least, more stringent restrictions should be imposed (FTC 2008). In 2011, the FTC released a set of guidelines to persuade the food industry in changing the way in which foods are advertised and marketed to children of all ages (less than 18 years of age) which complements the industry-led effort of CFBAI (FTC, 2011). In Chap. 6, Julie Ralston Aoki and Elizabeth Moore discuss the coordinated effort initiated by CARU and CFBAI and make the case whether or not modifications are merited to strengthen existing guidelines set forth by these two self-regulatory entities. Furthermore, corporate self-regulation of foods marketed toward children is not without its share of critics. Reports issued by the food industry document early successes in their compliance to nutritional standards; however, objectivity and scientific rigor is questionable given the nature of self-reporting, which are mainly qualitative and routinely biased, hence the need to critically evaluate from an impartial perspective. In the final chapter of Part II, Jennifer Harris and colleagues document the pros and cons of corporate self-regulation and propose methodological techniques to evaluate whether CFBAI has been or can be effective.

In Part III, we continue this discussion, grappling with ancillary issues of CFBAI self-regulatory pledges. To further illustrate whether CFBAI has lived up to its promise, Chap. 8 presents the first-to-date comprehensive examination which analyzes television advertisements aired before and after the implementation of CFBAI to show if there has been any improvement in children’s total exposure to food-related advertising, particularly as it relates to the nutritional content of food and beverage products—saturated fat, sugar, sodium, and fiber content. As Lisa Powell and her colleagues note, children’s exposure to unhealthy food advertisements had reduced, while fast-food ads actually increased during this time period, suggesting that despite these positive changes, fast-food ads tend to diminish any overall significant benefit in promoting healthy food products.

Food marketers use an array of effective tactics aimed at young consumers and their families with the goal of establishing brand loyalty or “the situation in which a consumer generally buys the same manufacturer originated product or service repeatedly over time rather than buying from multiple suppliers within the category” and their future purchasing behavior (AMA, 2012). In Chap. 9, Gary Wilcox and colleagues provide an extensive review of target advertising and its role in the marketplace, how it compares to the tobacco and alcohol market, and its effects on children’s consumer behaviors.

Part III also explores the rapidly changing food advertising landscape and the need to incorporate more novel, cutting-edge research to capture all of the nuances that are essential to obtain a deeper meaning of understanding about the decision-making process among young consumers. Today, digital marketing techniques are routinely used by fast food, snack food, and soft drink companies aimed at children and teens. In the following chapter, Kathryn Montgomery and her colleagues present a conceptual framework that illustrates how digital marketing differs from more conventional forms of marketing and critique several promotional campaigns used routinely by food companies aimed primarily at teens. In Chap. 11, Keryn Pasch and her co-authors demonstrate a multimethod approach, including eye-tracking technology combined with qualitative interviews (focus group and personal narratives) and quantitative surveys, to obtain a better understanding of how youth perceive and process food and beverage advertising. This chapter describes the utility of eye-tracking technology, which makes it possible for health researchers to measure a participant’s eye movement to objectively assess the components of food and beverage advertisements that appeal to youth.

Part IV shines a spotlight on food advertising and its increased influence on children and adolescents outside of the USA and how it is permeated throughout a young person’s life, particularly in the context of place and space or geospatial environments, such as schools and neighborhoods. We begin Part IV with an intriguing chapter by Melissa Stigler and colleagues, who document how the infusion of conventional forms of advertising and traditional Asian Indian culture is used to promote westernized, nutrient-poor and calorie-dense foods which have led to a drastic shift in India’s nutritional landscape.

Undoubtedly, the school environment can have a significant impact on food preferences and dietary behavior of school-age children and teens. According to a recent report by the Robert Wood Johnson Foundation, elementary schools across the nation commonly serve meals that do not meet current dietary guidelines, offering students high-fat food selections and sugar-laden beverages and other nonnutritious foods (Turner, Chaloupka, Chriqui, et al., 2010). To compound this even further, students spend a large portion of their time in school on a daily basis therefore they are exposed to an unique form of advertising, in-school marketing, which is evident through vending machines, school stores, à la carte food items as well as other mediums, such as school-related sporting events and fundraising activities. In this vein, Lara Latimer and colleagues provide a comprehensive review of in-school food marketing and report findings from a pilot study of middle-school students in Central Texas regarding exposure to food and beverage advertisements and

promotion in the context of their school environments. Of particular concern, is whether on-site advertising within the halls of school buildings and on the school premises or grounds can lead to unhealthy food choices and poor dietary habits. A subsequent chapter examines whether the influence of external ads, commercial signage located in close proximity to schools, is another contributing factor. Keryn Pasch and Natalie Poulos shed light on this by systematically employing an environmental approach to assess the presence of outdoor food and beverage signage near and around school properties in Central Texas, while Diana Grigsby-Toussaint and her co-authors explore food advertising in local retail food outlets and its potential impact on childhood obesity, particularly as it relates to food and beverage marketing techniques found in African-American neighborhoods. The authors demonstrate how tie-in campaigns and the use of animated characters lure children into making unhealthy food choices.

In Part V, we continue this discussion on how the interlocking dynamics of race, ethnicity, social class, or culture play a central role in the effects of community-level food environments on individual dietary behavior. Recent reports from the *Robert Wood Johnson Foundation Commission to Build a Healthier America* show that where you live may subject a person to deleterious health consequences, particularly individuals of socially vulnerable populations which include low-SES persons and certain racial/ethnic minorities (RWJF, 2008). The presence of convenience or corner stores that sell inadequate healthy food options (i.e., fresh fruit and vegetables), along with limited or deteriorating infrastructure within a community are contributing factors to ill health, as well as the insidious forms of marketing and advertising that are employed to target ethnic minority youth. Target marketing to communities of color is problematic and seen as a form of discrimination particularly when it promotes unhealthy food and beverages, perpetuates stereotypes, and exploits cultural identities that have contributed to higher rates of obesity prevalence among Latino and African-American youth compared to their white peers (Berkeley Media Studies Group, 2010).

In the first chapter in Part V, we begin with Sonya Grier and Vikki Lassiter, who provide a historical timeline of African-Americans as consumers, explore the cultural and social underpinnings of targeting African-American consumers, and discuss how advertising companies have capitalized and profited from tapping into cultural nuances that resonate with African-American youth who tend to be trendsetters and responsive to such ads. The authors also illustrate that African-Americans are not monolithic but quite diverse in their perspectives on advertising. The importance of understanding the cultural context of communities is emphasized in order to develop health-promoting activities to counter the ubiquitous nature of “multicultural marketing.” In the following two chapters, the authors complement this section by documenting the changing ethnic landscape in the USA with Latino youth comprising a sizable portion of the consumer market, as noted by Amelie G. Ramirez, Kipling Gallion, and Rebecca Adeigbe, while Karen Kramer and her colleagues indicate how the industry’s egregious “predatory marketing” of junk foods to ethnic minority children and adolescents is a social justice issue as well as an economic one. Chapter 18 explores from a legal perspective whether federal civil rights or

state consumer rights laws provide a potential basis for challenging target marketing of junk food to ethnic minority youth. The authors also stress the critical need for communities to become “agents of change” by increasing awareness among its residents, challenging target marketing of unhealthy foods, and mobilizing their efforts with other stakeholders to impact public policy in creating healthier food environments.

Engaging in physical activity on a daily basis is the cornerstone of health and well-being. Studies show that children who engage in active lifestyles are less likely to be overweight or obese. The set of papers in Part VI addresses media campaigns as mechanisms to increase physical activity. Evidence has shown that social marketing campaigns, such as antismoking programs, can be quite effective in preventing or reducing risky behaviors among young people. Social marketing is commonly referred to the application of commercial marketing principles (i.e., the 4 “Ps” of place, price, product, and promotion) to benefit society and the intended targeted audience rather than industry per se. Toni Yancey and her colleagues chronicle social marketing physical activity campaigns from the mid-1950s to the present. The authors also discuss Instant Recess®, an innovative intervention to reduce sedentariness among school-age children, which was created by the first author and has received national recognition. It integrates brief physical activity breaks of 10-minute intervals into public school curriculum and after-school settings. Marian Huhman, one of the lead evaluators of CDC’s *VERB: It’s What You Do!* a social marketing campaign to increase and maintain physical activity among tweens (children aged 9–13), along with her co-author Carrie Patnode discuss the success of this effort as well as offer insight and guidance on methods by which a local community can tailor the national campaign in Chap. 20.

In a subsequent chapter, the authors take an insider perspective to recount the development and implementation of the first ever comprehensive national physical activity standards for all Americans, with specific recommendations earmarked for target age groups (i.e., children and adolescents aged 6–17). Jane Wargo, Janet Fulton, and Sarah Lee argue that despite an impressive marketing strategy used to launch *2008 Physical Activity Guidelines for Americans*, the primary target audience (health professionals and policy makers) has limited knowledge about these guidelines and hence, efforts to foster physical activity among our nation’s youth have been severely truncated.

The book concludes with Part VII, which focuses on “real-time” solutions to reversing the trend in increasing rates of childhood obesity from the perspective of community, government, and industry. *Healthy People 2020*, a decennial publication produced by the US Department of Health and Human Services, is a national agenda on health promotion and disease prevention with specific objectives for America to meet within a ten-year period. With regard to reducing childhood obesity, among the target goals is to (1) reduce childhood obesity and prevent excessive weight gain among youth by 10%; (2) increase the proportion of adolescents who engage in vigorous or moderate physical activity; (3) increase the number of schools that offer healthier selections among competitive foods (food and beverages sold outside of the federal school lunch and breakfast programs); and (4) increase the proportion of adolescents who view television 2 hrs or less on a school day from 79%

to 87% with the expectation that kids will engage in more physical activities (USDHHS, 2010). Achieving the goals proposed in *Healthy People 2020* depends on the social capital of communities and the ability to foster viable options to engage in health-promoting activities.

Community-based approaches or grass-roots advocacy are viewed as promising approaches to reduce obesity prevalence, whether alone or in combination of other approaches. William McCarthy and his colleagues provide a brief overview of various successful efforts in the state of California in Chap. 22 that have been adopted to create healthier environments as the result of mobilizing constituents and influencing local officials to leverage resources to implement viable solutions either through legislative processes or other policy avenues. In a subsequent chapter, May Lwin, Benjamin Li, and Jerome D. Williams investigate how “exergames,” a new type of video gaming that involves physical movements to replicate “real-life” activities (e.g., various sports), can be a viable alternative to traditional physical fitness activities and serve as an effective solution to reduce the incidence of childhood obesity in Singapore, Thailand, and Indonesia.

In our final chapter, Ad Council Campaign Director Anthony Signorelli and his co-author George Perlov offer us insight on the Ad Council’s *Coalition for Healthy Children*, a joint initiative between major health organizations and food companies to integrate “healthy messaging” in food marketing campaigns with a key emphasis on three central foci: (1) to encourage children and families to opt for healthier choices; (2) reduce portion size; and (3) engage in physical activity. The authors document the rigorous testing process that was employed to verify the metrics used to assess whether the messaging clearly communicated its intended messages and if it was responsive to the target audience, youth and parents. This chapter denotes illustrative examples of several of the ways the industry incorporated health messages in their marketing and communications programs which have shown to be quite effective.

Combating childhood obesity is an ambitious undertaking. Yet as the contributors of this volume demonstrate, addressing obesity among children and adolescents requires an understanding not only of the behavioral factors (overconsumption of calories, sedentary lifestyles) that impact excessive weight gain and health complications associated with it but also of the role industry plays in influencing eating and physical activity behaviors, attitudes, culture, and personal choices. Recognizing the enormity of the obesity problem among young people cannot be fixed with a silver bullet solution is the first step. Involving all levels of government, food and beverage companies, researchers and public health advocates, as well as communities, parents, and other stakeholders, to move beyond pointing the finger of blame is critical for any success in creating viable solutions. Both private and public sectors must work in tandem using a multisectoral approach to highlight their unique strengths and avoid the pitfalls of working in silos which can easily thwart well-intentioned efforts. The key is to devise effective initiatives and policy interventions to slow down and reverse any further increases in childhood obesity by creating healthier food environments, changing the way in which food is directly marketed to children, and investing in community infrastructure to facilitate physical activity which are essential to prevent obesity from occurring in the first place.

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