

Social Determinants of Obesity: The Example of Turkey

Obezitenin Sosyal Belirleyicileri: Türkiye Örneği

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Öz: Obezite konusu genellikle tıbbi çözümlerin sunulduğu tıbbi bir sorun olarak ele alınmaktadır. Bu nedenle de daha çok bireylerin diyetini değiştirme ve fiziksel egzersiz miktarını artırma meselesi olarak görülmektedir. Oysa obezite sorununu anlayabilmek için, bireysel, sosyoekonomik, kültürel ve politik faktörleri içeren sosyal belirleyicilerinin de ele alınması gerekmektedir. Bu bağlamda, obezite sosyoekonomik, kültürel ve politik temelleri kabul edilmeden analiz edilemez. Bu çalışmada, obezitenin sosyal belirleyicileri Türkiye örneğinde ele alınmıştır. Obezitenin davranışsal, sosyal ve çevresel faktörlerinin anlaşılması gerektiği ve ancak, sağlık sektörünün ötesinde sosyal politikalar bağlamında alınacak önlemlerle çözülebileceği vurgulanmıştır. Son olarak, sosyal, ekonomik ve politik boyutları kullanarak, sağlığın sosyal belirleyicilerinin, bireylerin sağlığını ve refahını nasıl etkilediğini göstermeye çalışacağız.

Anahtar Kelimeler: *Sosyal belirleyiciler, obezite, sosyal politikalar, Türkiye*

Abstract: Obesity is often considered merely a medical problem with medical solutions. It is viewed as a matter of changing one's diet and increasing physical exercise. However, to understand and address this complex issue, its social determinants must also be deliberated, which include individual, socioeconomic, cultural and political factors. Therefore, obesity cannot be analyzed without acknowledging its socioeconomic, cultural and political underpinnings. In this review, the social determinants of obesity in Turkey will be used as an illustrative example. We will highlight the behavioral, social, and environmental factors, and argue that only by identifying actions through social policies beyond the health sector can obesity be clearly understood and tackled. Finally, we will analyze social, economic and political dimensions to show how the social conditions influence individuals' health and well-being.

Keywords: *Social determinants, obesity, social policies, Turkey*

Introduction

The prevalence of obesity and being overweight is rising, despite increasing knowledge, awareness, and education about obesity, nutrition, and exercise. The rise in obesity is considered a global public health problem in the 21st century. Some current views consider obesity a medical problem and the measures to deal with it are medicalized. As Adler and Steward explain (2009, p.49), a “medical model focuses primarily on treatment, addressing individuals’ personal behaviors as the cause of their obesity.” In simple terms, obesity is usually related with excessive use of sugar, fat and salt in food. Therefore, obesity generally is viewed as a technical matter of improving diet, reducing calorie intake and increasing physical exercise. However, obesity is a multifactorial complex problem and a sociological phenomenon. To understand the problem, its social determinants need to be considered.

In sociological terms, obesity is seen as a problem with the interaction of individual, socioeconomic and cultural factors. Therefore, obesity cannot be analyzed without acknowledging its social, economic and cultural underpinnings. In examining the cause and effect relationship, programs usually focus on obesity as an individual problem related to food intake and physical exercise. However, it is important to analyze obesity as a systemic problem that stems from the social environment, physical environment, and food and agricultural policies in order to develop a policy to fight against obesity. As former WHO director Margaret Chan put it at the Eighth Global Conference on Health Promotion in Helsinki, 2013:

“Economic growth, modernization, and urbanization have opened wide the entry point for the spread of unhealthy lifestyles. The globalization of unhealthy lifestyles is by no means just a technical issue for public health. It is a political issue. It is a trade issue. And it is an issue for foreign affairs.”

Most countries’ obesity prevention programs are useful but not enough to solve the growing obesity epidemic. They seek to change lifestyles such as encouraging people to adopt a healthier diet and exercise more. This tactic may be effective at changing attitudes toward obesity but do little to change long-term behavior. Today many people who cannot successfully lose weight through changing their lifestyles try surgery and drug treatments, but these interventions involve high risks and their success rate is also low. More comprehensive, systemic approaches are needed to prevent and reduce the growing obesity problem. Obesity cannot be prevented without involving every level of society, from the individual level to the family and larger community at the structural level. Multilevel integration across sectors is crucial in the struggle to achieve healthy lifestyle changes throughout society (Glickman, Parker, Sim, Del Valle Cook, and Miller, 2012). A holistic approach is required, one that focuses on process rather than outcomes and recognizes the interactions and interdependencies among individuals, organizations and social systems (Finegood, 2012).

Obesity is clearly a complex problem both for the individual and for the society (Finegood, 2012). In this review, we focus on social determinants of obesity. Turkey will be used as an illustrative example. The goal is to underscore that obesity stems from a multifaceted interplay of behavioral, genetic, environmental, social factors and to deal with obesity, actions should go far beyond the health sector. Discussions on the social, economic, and political determinants of health are important. Although genetics and lifestyle play an important role in health outcomes of individuals, interdisciplinary research shows how the conditions in which people are born, grow, live, work and age deeply influence their health and well-being (Global Health Watch, 2011).

The complexity of obesity is further illustrated by how difficult it is to characterize it. Medically, being overweight and obesity are defined as abnormal or excessive fat accumulation that presents a risk to health. A popular measure of obesity is the body mass index (BMI), a person’s weight (in kilograms) divided by the square of his or her height (in meters). A person with a BMI of 30 or more is generally considered obese (A person with a BMI of 30 is about 14 kg overweight) A person with a BMI equal to or more than 25 is considered overweight (WHO, 2019). Some experts question the validity of BMI as a measurement because: “it is not a precise measure of adiposity and must be interpreted with care. The

significance of this ratio is affected by variations in body structure across ethnic groups, growth and development in children and adolescents, and loss of height with aging” (IOM, 2012, p. 39).

Obesity is also controversial because some classify obesity as a disease, like the American Medical Association (Pollack, 2013), while others consider it to be a risk factor for other health conditions (see below). Declaring obesity as a disease, medicalizes the problem and leads to an approach that focuses on drugs and surgery rather than on the condition’s social determinants. Today obesity is stigmatized in much of the modern world, though it was widely perceived as a symbol of wealth and fertility at other times in history, and still is so perceived in some parts of the world (Haslam and James, 2005). Social constructionists perceive the so-called obesity crisis as an overblown issue and critiques characterization of obesity as an “epidemic” that results in victim-blaming by individualizing the problem. As Otero (2018, p.3) explains, “for the social constructivist, the BMI is flawed and unreliable, as it could, for instance, classify a weight lifter as obese.” In this article, our focus will be on social determinants of obesity. In the section below the prevalence of obesity globally and its financial and social costs will be discussed. Following that section, inequalities in obesity rates will be explained.

Worldwide Obesity

Obesity and being overweight have already become a global public health issue. The worldwide prevalence of obesity nearly tripled between 1975 and 2016 (WHO, 2018). New data from 188 countries show that, today, 2.1 billion people (nearly 30% of the world population) are either obese or overweight (Lancet, 2014). According to WHO global estimates in 2016, about 13% of the world’s adult population (11% of men and 15% of women) were obese. In addition to this, 39% of adults aged 18 years and over (39% of men and 40% of women) were overweight (WHO, 2018). In thirty-six OECD countries, 28.8% are obese and 35.6% are overweight of total population (OECD, 2019). In 2013, some of the highest rates of obesity and overweight were seen in the Middle East and North Africa, where more than 58% of men and 65% of women age 20 or older were found to be either obese or overweight (Murray and Marie, 2014). These statistics show the alarming magnitude of the problem.

The burden of deaths associated with obesity has already shifted towards developing countries. As a result, obesity is no longer only a developed country problem. Many developing countries face a “double burden” of disease. They continue to deal with problems of malnutrition and infectious diseases, and at the same time face non-communicable disease risk factors such as obesity and overweight, especially in urban settings (WHO, 2019). Developing countries are not well equipped to handle the economic and social costs of obesity. Prevention is the most cost-effective approach for such countries. In this study, Turkey will be used as an example of developing countries’ experience of obesity prevention programs. In Turkey the incidence of obesity is also increasing. Though the obesity data on Turkey varies greatly, all the research agrees that obesity is a growing problem. The prevalence of obesity among the adult population in Turkey is an alarming 30.3%, 20.5% in men and 41.0% in women. In addition, 34.6% of the population was overweight in 2010 (Turkish Ministry of Health, 2010a). Below we will discuss health and economic costs associated with obesity.

Health and Economic Costs

High rates of obesity incur both direct and indirect health and economic costs for individuals and society. Today, 65% of the world’s population, including all high-income and most middle-income countries, lives in a country where overweight and obesity kills more people than malnutrition (WHO, 2009). Prevention of obesity brings health and economic benefits to individuals, society and government health budgets. In 2010, the OECD asked its members to adopt comprehensive strategies that address a range of socioeconomic and demographic groups and include affordable and cost-effective programs to improve diet and increase levels of physical activity.

Obesity and overweight are estimated to be the sixth most important risk factor contributing to the overall burden of disease worldwide (Haslam and James, 2005, p.1197). They increase the risks of

coronary heart disease, ischemic heart disease, stroke, type 2 diabetes mellitus, and some common cancers (WHO, 2009). In 2004, WHO classified obesity as the fifth leading cause of disease worldwide and the third leading cause in the developing world. It is estimated that obesity kills 2.8 million people each year and that 57% of these deaths occur in developing countries (WHO, 2009). The European region has the highest rate of deaths from overweight and obesity (11%), followed by the Americas (9.5%). Seventy three percent of these deaths in the European region occurred in lower- and middle-income countries.

The direct health and economic costs to individuals include a higher risk of non-communicable diseases, disability, discrimination, depression, poorer quality of life, lower income and higher risk of unemployment. Studies show that a person with severe obesity (with a BMI of 40-45) lives on average for 8 to 10 years less than a person who is not overweight, while the risk of death for individuals who are overweight rises by 30% for every 15 additional kilograms they put on. In ten European countries, the obese are nearly twice as likely as those of normal weight to have a disability (OECD 2010). In recent times, due to stigmatization, obese people are less likely to be employed and more likely to experience discrimination when they apply for jobs because they are perceived to be less productive and to be absent more frequently from work. In the OECD as a whole, the obese earn 18% less than persons of normal weight (OECD 2010). As noted, obesity and overweight cost the developed world 21 million disability-adjusted life years (DALYs) and the developing world 8 million DALYs (WHO 2009).

At the societal level, obesity is associated with high health care costs and lower economic productivity (Branca, Nikogosian and Lobstein, 2007). In a given year, the health care costs incurred per capita by obese people are 25% higher than the health care costs incurred per capita by people of normal weight. Obesity is responsible for 1-3% of total health expenditures in most OECD countries (OECD, 2010). However, dealing with the direct and indirect costs of obesity puts more pressure on the health care budgets of developing countries due to their low budgets. For example, in 2011, per capita health care expenditure was US\$1160 in Turkey, and 70% of total government's health expenditure was spent on non-communicable diseases alone (WHO, 2012). As a result, countering obesity has clear public health benefits for the society. Its mitigation has been identified as a key to non-communicable (NCD) disease prevention (Henry, 2011). In the next section, we turn our focus from the health economic costs of obesity to a discussion of the inequalities in the rates of obesity.

Inequalities in obesity rates

Sociologists try to explain the relations among health and social class, gender, ethnicity, age and geography (Giddens and Sutton, 2017). Scientific research shows the relationship between the social class and health outcomes. The inequalities in health outcomes are caused by inequalities in social and economic conditions rather than individual, behavioral factors. In other words, obesity is not about individual choice but structural determinants of diet and health (Otero, Pechlaner, Liberman and Gürcan, 2015). Materialist explanations can account for class differences in health. "Structurally determined differences in the spheres of production and consumption are considered to be the most likely cause of social class differences in health." Therefore, these class differences in health can be explained "as the result of structurally determined differences in the way the members of these social classes lead their lives" (Blane, 1985, p.434, 423).

In relation to these social class differences, "like most risk factors, obesity is found more often in socially disadvantaged groups" (Adler and Steward, 2009, p.51). Correlations between BMI and socioeconomic status (SES) have been explained in several ways. Low socioeconomic status, especially education level, has been identified as one of the contributing factors to obesity (Adler and Steward, 2009; McLaren, 2007). Accordingly, research in several OECD countries has shown that women with limited education are two to three times more likely to be overweight than highly educated women. However, smaller or no disparities exist among men (OECD, 2010). Similar results were found in Turkey. Ergin, Hassoy and Kunst (2011, p.58) show that the "prevalence of overweight was highest for

women in low-educated and middle-wealth groups.” Income and education influence food preferences and choices and the predilection to exercise. To the extent that poverty is causally associated with obesity, this implies that reducing socioeconomic inequalities may be a vital component of policies to reduce it (IOM, 2010; Jones-Smith, Gordon-Larsen, Siddiqi and Popkin, 2011; Popkin and Larson, 2004).

In developed countries, some researchers have associated affluence with lower BMI, because those who are prosperous can afford higher quality, more costly food, are motivated culturally to take exercise, and feel more pressure to be slim. By contrast, studies in developing countries suggest that prosperity is associated with a high BMI, because richer people eat more, consume higher calorie foods, and are motivated culturally to exercise less and develop a bulkier physique (McLaren, 2007). According to one systematic review (Dinsa, Goryakin, Fumagalli and Suhrcke, 2012), in low-income countries and countries which score low on the human development index, obesity rates appear to rise with SES status, but in middle income countries the association between SES and obesity is mixed for men and negative for women.

When we examine obesity rates in Turkey we see the following picture. While the obesity rates for Turkish men (13%) is lower than those of European men (20.1%), the rates for women (20.9%) are similar to European countries (23.1%) (WHO, 2012). Higher obesity rates for women might reflect gender inequalities, since only about 18% of Turkish women work in paid jobs. Women tend to spend more time at home and be inactive. Previous nationwide data from Turkey reported a general obesity rate of 22.3% (Satman et al., 2002). Figures from the Turkish Statistical Institute (2012) indicate that 17.2% of adults aged 15 and above are obese (men 13.7%, women 20.9%), and that 34.8% are overweight.

Contributing Factors to Obesity

Obesity is a multifactorial complex problem. Barriers to changing individual behaviors include the cost and difficulty of accessing healthy food and the lack of infrastructure for safe and enjoyable physical activity (Herrington, Dawson and Draper, 2014). Simply warning individuals of the risks of unhealthy diets and lifestyles does nothing to alleviate these obstacles. In sociological terms, obesity is seen as a problem with the interaction of all these structural and individual level influences. In this section social environment, physical environment, food environment and policies and individual behavior factors will be analyzed in relation to obesity.

Social environment

The confluence of urbanization, technological innovation, changing means of production, cultural homogenization and economic globalization has a recursive effect on changes in the distribution, consumption and meaning of food. The pace of social transformation in the developing world is currently even faster than it was in Western countries in the twentieth century. Each country has distinctive characteristics because of its geography and history, but change is universal. Increasing obesity rates are influenced by these societal changes that are the product of increased modernization. In addition, unhealthy eating habits are influenced by the popular consumer culture that dominates today’s post-industrial capitalistic societies (Baudrillard, 2008; Bauman, 2010). There is no single factor behind the increasing obesity rates. When the countries modernize their food system, there is nutritional transition toward refined and fatty foods. In addition to these, other societal changes resulting in higher rates of obesity are increased access to motor vehicles and mechanization of work and sedentary lifestyles (Dixon and Broom, 2007; Popkin, Adair and Ng, 2012; Rosengren and Lissner, 2008, p.260).

Upper middle-income countries like Turkey are at risk of increased obesity rates because the population is moving from a rural culture, home cooking and agricultural self-sufficiency to an urban mode of life, sedentary work, and processed obesogenic food, the so-called “nutrition transition.” Globally, this nutrition transition is related with increasing obesity rates (Popkin, Lu, and Zhai, 2002;

Popkin and Larson, 2004; Popkin, 2004). In addition to the nutritional transition concept, Canadian Sociologist Winson (2013) developed the concept of “dietary regimes” to complement the nutritional transition approach. Winson (2017, p.563-564) highlights the fact that:

“[T]here is a political-economic reality that stands between eaters and the production of food in every epoch. This reality necessarily shapes, to varying degrees, the diets of the great majority in societies ever since the neo-lithic revolution when humans embraced the domestication of plants and animals, and human settlement became increasingly marked by social stratification and ever-more stark differences in resources and power within society.”

Dietary regime points out the social forces and socioeconomic and technological factors that shape diets in a society (Winson 2017, p.564). The industrial diet becomes globalized via transnational food and retail corporations in post 1980 (Winson, 2017, p.565). Turkey’s nutritional transition from more traditional food to industrial diet is a good example. American style fast-food nutrition, which first gained popularity in Turkey during the 1980’s (Akarçay and Suğur, 2015), is becoming more common. Fast-food restaurants have become spots frequented by middle to upper income level families and their children, acting as social spaces for families to observe and to be observed engaging in this quintessential performance of modernity. Unhealthy eating has continued to rapidly increase due to the consumption of fatty, high caloric, industrially packaged goods, as well as increases in habitual, daily, consumption of junk foods and fast food.

The scale and rapidity of migration from rural to urban areas also indirectly contribute to Turkey’s current obesity problem. In 2011, 70.1% of the Turkish citizens lived in cities compared to 51.3% in 1990 (TurkStat, 2012). City structures encourage people to use cars and buses rather than walk or cycle. They watch more television and sit longer at computers. Data gathered by the Turkish Family Structure Research indicate that watching TV is the most important shared activity of Turkish families (59.4%), and that 67.4% of the participants do not play any sports. The aggressive, targeted, marketing of unhealthy products in the media cannot be reasonably ignored. On the other hand, there are also advertising campaigns, often sponsored by national governmental agencies, that encourage people to develop healthy habits. Unfortunately, the division of time between unhealthy and healthy food choices (e.g., time allotted for the advertising of potato chips versus that of fruit or vegetable options) is massively allocated towards making unhealthy choices. This imbalance in advertising has a significant impact at the societal level and is indicative of the need to investigate the effects of consumer society on the development of healthy eating and exercise habits amongst adults and children. Akbay (2007) carried out a study on the consumer characteristics that have an impact on fast-food consumption, listing the factors affecting fast-food consumption in Turkey as follows: increased participation of women in the labor force, long shift hours, increase of families with double salaries, decrease in the number of people in the households, urbanization, growth in tourism, increased education, income level and number of fast-food restaurants. Increased consumption of fast food is also a result of the market-oriented neoliberal modernization of Turkey.

Physical environment

The built environment contributes to the prevalence of obesity as well. In urban settings, many cities lack sidewalks, parks and other places where people can walk, cycle or play outdoors safely. Parents spend long periods in cars getting to and from work; children are bused or driven to and from school. The amount of exercise that urban dwellers take correlates directly with the density of local public facilities and spaces for recreation that are available (Friel, Chopra and Satcher, 2007). To reduce obesity, the built environment needs to encourage physical activity and the adoption of healthy diets. A systematic review of built environments and obesity in disadvantaged populations (Lovasi, Hutson, Guerra, and Neckerman, 2009, p.7) revealed that disadvantaged groups were living in worse environments with respect to food stores, places to exercise, aesthetic problems, and traffic or crime-related safety.

Turkey's experience is exemplary in this respect. As incomes have risen in the last twenty years, numerous large shopping malls have been built in every city, hosting famous international brands. City residents socialize in these malls and their consumer culture is influencing lifestyles and eating habits. The malls' food courts offer many kinds of fast food, which attract all age groups but particularly teenagers. While culturally Turkish people tend to eat meals at home, in recent years consumption of prepared foods and fast food has increased.

Food environment and policies

Globalization, liberalized trade, industrialization and urbanization have been accompanied by a trend to westernize diets, characterized by increased consumption of meat and milk products, and oils with high levels of saturated fats, and reduced consumption of grains, vegetables and fruits. The 2012 Global Food Policy Report predicted that by 2050 demand for meat will increase by 17% in Europe and 143% in Central and South Asia. This appears to be a recipe for increased rates of non-communicable diseases (NCD) and environmental degradation. If transnational food companies encourage the world to adopt a Western diet as they occupy new markets, the negative effects of these unhealthy diets on health will only grow.

Lifestyle approaches to obesity tend to single out the individual behavior of particular groups (for example, in the US, communities of color), rather than political and economic factors (such as agricultural policies that artificially lower the price of high-calorie foods) (Kimura, 2011). Unbalanced diets and malnutrition are issues encountered more frequently in underdeveloped and developing countries due to fluctuating and rising costs in food prices. Issues such as global warming, weak nutritional and agricultural policies are further exacerbated by the unequal distribution of global resources and are understood to be leading factors of increasing food prices (FAONewsroom, 2008).

The influence of contemporary neoliberal agendas must also be considered in situations where economic development is valued more than human development and profit ranked higher than healthy diets. In the words of Winson (2010, p.584), we need to "challenge the hegemony of neoliberal discourse in fundamental ways to deal with this problem. Agendas of transnational food corporations are seen to be directly contradicting efforts to ensure healthy diets. Under these conditions, it is our destiny to become obese worldwide." It is necessary to do more to construct an environment in which healthy food benefits the health of people worldwide and is not merely an element of economic growth.

Turkey's experience with high fructose corn syrup (HFCS), which is used as a sweetener in beverages and food products, is an example of agricultural policies that favor the production of unhealthy food but are highly profitable for the food industry. It also provides a good example of policy incoherence. While the Ministry of Health launched a country-wide obesity prevention program, another government agency namely council of ministers increased the quota of HFCS which are known to increase obesity. Research suggests that HFCS use correlates with indicators of diabetes. The United States, for example, has the highest consumption of HFSC and the highest obesity rates in the world (Goran, Ulijaszek and Ventura, 2013).

Turkey liberalized its economy in the 1980s. Transnational food and tobacco companies were given access to the Turkish market. When Turkey faced a serious financial crisis in 2001 and requested credit from the International Monetary Fund (IMF), it passed a new law, the "Sugar Bill," which permitted the import of sugar and high fructose corn syrup. The IMF reportedly supported this initiative, for which, according to rumor, Cargill – the largest producer of HFCS in Turkey – lobbied members of Turkey's parliament. At the time, Turkey was the world's fourth largest producer of sugar beets. The new law allowed the government to raise the quota of imported sugar to up to 50 percent, opened the way to privatization of the sugar factories, and cut agricultural subsidies to sugar beet farmers. In May

2013, Turkey raised the HFCS quota from 10% to 15% of total sugar consumption. (Some European countries interdict the use of HFCS in food; elsewhere quotas are not higher than 4%). Due to the public's increasing awareness and concern about HFCS in food, the Turkish government decided in 2019 to reduce the HFCS quota to 2.5% of total sugar consumption.

The political influence of the food industry is not confined to developing countries, although weak economies are evidently more vulnerable. The following example indicates how difficult it is to change food policies. In an effort to support efforts to reduce meat consumption, the United States Department of Agriculture (USDA) declared that Mondays would be meatless in the department's cafeteria. The National Cattlemen's Beef Association issued a press release stating that anyone who believed agriculture was fundamental to sustaining life on the planet should condemn the USDA. Senator Chuck Grassley of Iowa, a major meat-producing state, tweeted: "I will eat more meat on Monday to compensate for the stupid USDA recommendation about a meatless Monday." Congressman Steve King (also of Iowa) tweeted, "Heresy! I will have double rib-eye Mondays instead." As a result, the USDA announced that "Meatless Mondays" had been posted "without proper clearance" (Bittman, 2012). This example shows how political influences shape the food policies in favor of the industry.

Individual behavior

Social and environmental influences are modified by individual characteristics, such as gender, age, marital status, migrant status, education, occupation, and income. Individual choices influence food consumption and physical activity. It is important to understand such differences because some individuals in a given obesogenic environment will become obese while others will not. The pathological processes of obesity include complex environmental and genetic interactions. For example, individuals from disadvantaged communities seem to be at higher risk than more affluent individuals partly because of fetal and postnatal imprinting (Haslam and James, 2005, p.1197). In addition, some behavior may be influenced by evolutionary biology: for example, evolution may have predisposed us to eat massively when opportunity arises, to lay down fat in anticipation of famine. It is probably true that there are some individuals and groups more predisposed to obesity, but that does not address the social issues that prevent people from pursuing a different behavior. In this sense life styles, behavior and diet are perceived as an individual choice.

Neoliberal policies focus on these ideas to push back against claims of corporate culpability. Therefore, it is suggested that the problems of obesity are due to an individual's dietary choices and sedentary ways of living. On the other hand, as Guthman (2011, 87-90) explains, "people live in obesogenic places because their class status does not allow them to do otherwise. Class and race are key factors in determining where one can live." Otero (2018, p.4) refers to "Guthman as considering some questions inspired by Hannah Arendt: Who has the choice to have choice? This question points to structural issues as the main drivers of overweight and obesity in populations." An important factor is that affluent people generally have more access to healthier options because they have more disposable income. Usually, the cost of organic and healthier foods is more expensive, creating barriers for individuals with low income to obtain healthier food options.

Comparisons between the public relations strategies deployed by tobacco companies and those of the packaged goods industry are instructive. The tobacco industry attempted to deflect corporate duplicity, specifically by hiding the effects of nicotine addiction and cancer from tobacco users, by focusing instead on issues of individual freedom and choice. Similar strategies can be seen by packaged food and soft drink companies who have also shifted the argument away from corporate malfeasance towards an issue of individual free will, suggesting that individuals have an inherent right to consuming whatever foods that they desire. These reductionist approaches put the blame on individual choices rather than into reforming the policies that allow bad food to be produced (Guthman, 2011, p.9), resulting in the role that education is the solution to encourage individuals to make healthful choices. If society and government are serious about reducing the rates of obesity in Turkey, greater intervention in regulating food and beverage industries must be applied.

Current Issues Related to Obesity in Turkey

Similar to other developed and developing nations, there are disparities in obesity rates in Turkey as well. As was mentioned in the section above, social inequalities play an important role on the greater incidence of obesity for some groups. Disparities in obesity rates are related to social variables such as SES, gender, geography and age. The English and Turkish literatures have been reviewed to identify obesity research in Turkey. The results of some studies show that socioeconomic level is an important factor in obesity. Accordingly, one study showed that people with the highest SES and level of education had the lowest BMI (Ersoy, Imamoglu, Tuncel, Erturk and Ercan., 2005). Ergin, Hassoy and Kunst (2011) found that less educated and middle-income women are more overweight, while male obesity increased with wealth. In addition, there was a higher risk of obesity for unemployed men, men with a lower level of education, women with hypertension, and for both men and women with a family history of obesity. The correlation between obesity and high socioeconomic status was greater in the country's eastern regions. This phenomenon could be explained by two social variables: low education levels and increased income levels.

Another study by İşeri and Arslan (2008) found that age, region, and gender are significant determinants of obesity in Turkey. Obesity outcomes for women were particularly influenced by age, giving birth, and being housewives. Similarly, Erkol and Khorshid (2004, p.102) found that being a housewife and a family history of obesity were predisposing factors for obesity. Bagriacik et al. (2009) found that the following factors contributed to obesity in six regions of Turkey: lifestyle; excessive carbohydrate and fat consumption; lack of exercise by women; excessive alcohol consumption by men.

The Turkish government took several initiatives to reduce obesity. First, the National Food and Nutrition Action Plan was released in 2002, covering the period of 2002-2010. It envisioned that the Ministries of Health, Agriculture and Education would work with universities, the food sector, and civil society to tackle obesity and chronic diseases associated with it, and promote active lifestyles (DPT, 2001). In addition, in 2007 an Obesity Action Plan Working Group was established under the leadership of the Ministry of Health. The group's goal was to prepare and disseminate information on obesity through television. These messages encouraged workers to exercise during their lunch break, promoted healthy eating programs in schools, and labelling of food. Although the goals of this group are in line with the current WHO (2008) guidelines, the group had little capacity to enforce, monitor, or evaluate the effects of its work.

In 2010, the Turkish Government launched an initiative titled "The Healthy Nutrition and Active Life Program of Turkey: Obesity Prevention and Control Program of Turkey." This prevention program covered the period from 2010 to 2014 (Türkiye Sağlıklı Beslenme ve Hareketli Hayat Programı, 2013). Its goal is stated in the summary:

"The Obesity Prevention and Control Program of Turkey contain the policy, control program, and an action plan as the major headings. Success in this area will be achieved by careful, patient and continuous application of Turkey's Obesity Prevention and Control Program. The Obesity Prevention and Control Program of Turkey was prepared with the aim of building scientific and political support for strengthening intersectoral action to prevent obesity, which is increasing in Turkey."

Within the scope of this program, different public service announcements (PSAs) have been broadcast on TV and radio to prevent and reduce obesity. These spots included information about how to measure the Body Mass Index (BMI), recommendations on reducing portion sizes and walking ten thousand steps a day. These PSAs on TV also showed stories of real people who successfully lost weight. Through these spots, individuals were given the message that obesity is not their fate, but their preference. Thus, the entire responsibility of being obese is attributed to the individual. Although one study (Arıkan, Karakaya, Erata, Tuzun, Baran, Levent, ve Yeşil, 2014) evaluating the impact of this campaign found that participants (28.5%) in the study adopted desired behavioral changes after exposure to the campaign, most of the study's researchers work for the Department of Health Promotion at the Ministry of Health that runs the very campaign. The obesity programs run by the Ministry of Health

mostly address the changes at the individual level, which are proven to be ineffective in the long term. In addition, the government launched an excessive salt intake reduction program for the period 2011-2015. WHO recommends that individuals should not consume more than 5 grams of salt per day. Average consumption of salt in Turkey is around 18 grams per capita per day. Finally, the government introduced a Diabetes Prevention and Control Program for the period 2011-2014.

Today, under the influence of neoliberal policies, the responsibility for being healthy is individualized. For this reason, social and environmental conditions, and health policies are perceived as not directly related to health and tend to be ignored. As a result of this understanding, being obese or overweight is seen almost as the fault of the individual. Maintenance and enforcement of the above-mentioned interventions are limited. Though they indicate a range of necessary actions, they do not contain clear advice on what specific steps are to be taken. Proposed action remained at the level of good advice. To illustrate, the obesity prevention program recommended regulation of food advertisements in the media, to protect consumers and especially children. In practice, even though the government has passed regulations, aggressive food and beverage advertisements are still being shown on children's cartoon channels.

The current obesity prevention program emphasizes the individual's responsibility to eat healthily and exercise more. Although the program states that it works in cooperation with the food industry, it frames action in terms of individual efforts, rather than a more fundamental restructuring of the regulatory and economic system. Recommendations are often limited or not enforced, many programs are inadequate, and their sustainability is also a cause for concern. The Ministry of Health ran a media campaign in 2012 to increase awareness of obesity and encourage people to exercise. However, the campaign has not been active since 2016; to have an effect, such messages need to be aired over a long period of time.

Furthermore, the governmental obesity prevention program has also not adequately addressed the needs of particular groups. Anti-obesity messages should be designed specifically for housewives, working women, adolescents, and the elderly, for example. The priorities should be prevention and educating children to have a healthy relationship with food, because it is very hard to change adult behavior. Research will also be needed to help individuals who are already obese. Systematic monitoring and evaluation are equally essential if programs are to be effective (Blas, Sommerfeld and Kurup, 2011). It is also important to involve civil society in the design of obesity prevention initiatives. Future research should identify and test approaches for community partnerships. In addition, the impact of programs should be established empirically to broaden the evidence base and improve future efforts (Gortmaker et al., 2011). The biomedical model of approaching obesity as a disease focuses more on the causes of obesity than on preventive action. To develop solutions for the complex obesity problem we need to understand much better the larger social, economic, and environmental contexts in which it evolves.

Discussion and Recommendations

Obesity is a growing problem and calls for more comprehensive approaches. Recommending to people that they should eat less, and exercise more individualizes obesity and ignores its multi-faceted nature, obscuring the complex social, economic and material factors that influence the lives and choices of individuals (Share and Strain, 2008). Therefore, to tackle increasing obesity rates social inequalities should be addressed. Policy approaches are usually more cost effective than health promotion or clinical interventions (Gortmaker et al., 2011, Walls, Peeters, Proietto and McNeil, 2011). Governments are eager to identify areas where policy interventions can be more efficient and effective. Legislative measures that influence income distribution, employment, housing and social services are most likely to influence the behavior of the whole population (Walls, Peeters, Loff and Crammond, 2009; Walls et al., 2011).

Available research indicates that community-wide policy and environmental actions have the most potential to make a broad and sustainable impact (Hector et al., 2012). Because obesity prevention

requires social change, communities and key stakeholders should be involved in all decisions so that they feel ownership for successes that are achieved and maintained. Cost-effective, feasible, and appropriate interventions should take account of the constraints of local contexts. Such actions should be integrated in health strategies, but also in non-health sectors such as trade, agriculture, transport, urban planning and development (Gortmaker et al., 2011).

The prevention spectrum developed by Cohen and Swift (1999) is a useful framework for developing multi-faceted approaches to address complex health problems. They suggest that integration is required across the following levels: “policy and legislative approaches; approaches involving changes in organizational policies, environments, and practices; approaches designed to foster changes in communities and neighborhoods; health communication and social marketing approaches; interventions in health care settings; and finally, multilevel, multisectorial approaches” (IOM, 2010, p.91). In line with these recommendations, we will discuss the successful interventions that were identified in the literature. They will be analyzed under three main titles: (1) policy and governance level changes; (2) changes in the social environment; and (3) individual level changes. Actions that could be implemented to reduce obesity including the following community-wide food policy and environmental actions listed below:

Policy and governance level changes

These include high-level policy and legislative options that emphasize successful interventions for improving the social and physical environment to address obesity. The first factor we wish to highlight is the importance of political commitment from the highest levels of national and local government to develop successful prevention programs (Dowell and Farley, 2012). It will be necessary to establish a national and international health equity surveillance system, for the social determinants of health in general and for obesity, nutritional status, food availability and consumption, and physical activity patterns in particular, by means of training, policy development, and strategic partnerships with a range of stakeholders (WHO, 2008).

Another aspect is addressing the role that inequality plays with food preferences. Obesity prevention and treatment strategies should account for economic dimensions of consumer food choices. Many snack foods, which are palatable and energy-dense, are relatively inexpensive and are deliberately marketed to lower income groups. Diets lower in caloric density but higher in nutrient quality are comparatively expensive under typical market conditions (Drewnoski, 2012). Thus, making healthy food available in disadvantaged communities would be a critical option.

A third issue related to political commitment referenced above concerns the need to monitor the influence of the food industry on individual nutrition and eating habits. Currently, transnational food companies exercise considerable influence over trade agreements and agricultural policies. At the national level, they also shape the political process by lobbying and contributing to political campaigns. Clapps and Fuchs (2009) argue that their influence is so great that a “public regulatory framework” is needed to re-establish a balance of power. Anticipating and responding to opposition from the food and beverage industry is one of the key obstacles to enacting regulatory measures that will have the effect of increasing public health and reducing obesity. The industrialization of food production and use of additives need to be controlled and regulated. Strict regulation is also required to reduce excessive amounts of fat, sugar and salt in processed food. To accomplish this traffic light labelling of packaged foods could be introduced as it was done England and Australia. In general, food production should be more transparent. Companies should be obliged to produce food that is less energy-dense and richer in nutrients. This would produce a physical and social food environment that would be inherently healthier.

Fourthly, banning the advertisement of unhealthy foods, especially advertisements that target children, should be another policy tool. Reducing TV advertising of unhealthy food and beverages to children was found to be a cost-effective intervention (Gortmaker et al., 2011, p.5). Food industry’s sponsorship and promotion also should be banned. Processed foods should clearly show their salt, trans-fat and sugar content, and calorie count. Labeling menus in fast food restaurants could increase public awareness. This step should be supported by other preventive measures. Though labelling is recommended as an important tool, an even better option would be to ban the use of trans-fat and HFCS

in food. Labelling enables individuals to make informed choices but individualizes responsibility. Its effect might be to minimize the food industries' responsibility. In addition, increasing taxes on food with high salt, fat and sugar content might encourage food industry to produce healthier food.

An additional policy-related recommendation is that governments should subsidize healthier foods to encourage their consumption. Research has shown that low-income children and adults consume more fruit and vegetables when prices fall, and that this pattern reduces body weight outcomes in both groups (Powell, Chriqui, Khan, Wada and Chaloupkai, 2012). Some countries already successfully provide food stamps that enable disadvantaged lower income groups to obtain healthy food. Governments and other stakeholders should invest in agricultural policies (including policies for production and subsidy) that support environmentally sustainable agricultural production and disseminate organic agriculture practices and small farms. The production of fruits and vegetables should be subsidized. More integration of the agricultural and food sectors is needed to reverse loss and destruction of natural resources through agriculture free of pesticides, synthetic fertilizers, and genetically modified (GMO) seeds. The politics around GMO seeds is important. Transnational companies such as Monsanto lobby in favor of using GMO seeds. They passed legislation in Turkey that prevents local farmers from using ancient seeds and instead, use the seeds provided by the multinationals which are hybrid that need to be purchased every year. This is not only threat to the environment, biodiversity conservation and sustainable land management but also a threat to small farmers' livelihood.

Finally, those working to reduce the incidence of obesity might find valuable experience and good practices in the campaign to reduce tobacco use. This might also be the subject of a useful research project. (Disclosure: The author of this paper has already published research on the area of tobacco control). Successful interventions in tobacco control could be applied to obesity programs. Tax and price measures could be used to reduce the demand for unhealthy food products. These would have a greater impact on adolescent consumers. Some countries already tax sugar sweetened beverages and food products that contain trans-fats. Increasing tax rates on unhealthy food and drinks could reduce obesity (Chriqui, Chaloupka, Powell and Eidson, 2013; Mytton, 2012, Powell et al., 2012). An increasing number of OECD countries have introduced taxes on unhealthy foods and sugar-sweetened beverages. Hungary increased tax on food including high levels of sugar, salt and caffeine. Finland and France increased excise taxes on soft drinks. Denmark increased taxes on foods that contain high levels of saturated fat and sugar, however, abolished them in 2012 following resistance from the food industry and other parties. This exemplifies that developing policies is one thing but sustaining them is another.

Changes in the social environment.

From a sociological perspective individuals are shaped by their social environment. As we mentioned before conditions in which people are born, grow, live, work and age deeply influence their health and well-being. Thus, social organizations like school and workplace have the potential to positively influence individuals' lifestyles. In addition, designing healthy cities could influence physical activity and diets in positive ways that could contribute to decreasing obesity.

The first area for discussion of changes in the social environment is schools. Schools are good points to intervene for behavioral change. School-based programs should limit the availability and consumption of sugar-sweetened beverages (SSBs) and high-calorie foods that are energy-dense and nutrition-poor (EDNP). The available evidence suggests that legislation is required to restrict the availability of SSBs (Hector et al., 2012). Healthy snacks, fresh vegetables and fruits should be available in school cafeterias (Chokshi and Stine, 2013). In addition, regular physical activities should be part of the school curricula. More broadly, inequalities in school environments and broader economic, social, cultural, and institutional forces that shape educational outcomes and consumption will need to be addressed (Share and Strain, 2008). To reduce television watching and increase after-school activities would be other important goal. These suggested actions such as school sports and meal programs require collaboration between national and local governments and schools. Attention should be paid to the fact that schools are very specific institutions, with their own traditions and culture, budgets and political constraints (the influence of teachers, the influence of parents, etc). Policies should address what needs

to be done to prevent obesity at the level of the curriculum, training teachers, involving headmasters, engaging parents and children, as well as procuring the support of local health institutions.

The workplace is another important component in individuals' lives that could create change. Improving the physical environment through employer-sponsored wellness programs is important. Employers should provide incentives to their employees to eat healthily and exercise. These incentives could be in the form of giving some bonuses to employees. Workplace cafeterias can provide low calorie meals, set better nutrition standards, post calorie content on menus, and make more fruits and vegetables available.

The last change in the social environment we wish to discuss is related to the fact that most people live in cities. Creating facilities for physical exercise when designing and building urban infrastructure could contribute to obesity prevention. Local governments should support programs that enable people to walk and cycle and 'travel actively.' It has been known that, increasing the availability, affordability, and use of community recreational facilities has proved to be an effective policy tool (HHS/USDA, 2010). Introducing safe routes to school and safe pathways for walkers should also be explored. Studies show that, when it is easy to walk or ride bikes to school and work, people do so (IOM, 2010). Thus, building public support for investment in new recreational areas, public transport, and biking trails is vital (Chokshi and Stine, 2013). If children are to ride their bikes more often, safe cycling lanes are needed, as well as affordable bikes and local bike shops. Another important step to take in the city life could be creating and supporting community gardens. Local governments can play a vital role in these actions. Furthermore, facilitating the establishment of farmers' markets and encouraging supermarkets to sell healthy food could reduce consumption of high calorie unhealthy foods.

Individual level changes

As we have stated throughout this paper, it is very difficult to change individual behaviors. Intervention programs that target individual level changes have been found to be the least successful because of the low success rates in the long run. Some of the individual level interventions identified in the literature include introducing health promotion programs to raise individual awareness of the harmful effects of obesity and the importance of healthy eating, providing cooking classes for families, and using communication tools, social marketing, and new technologies to enhance the impact of programs to prevent obesity (Glickman et al., 2012). If the public wants better government policies on food, and asks for them, this is vital to achieving large scale change, but this implies much higher awareness, evidence for which will be seen in lifestyle change. However, research does not suggest that such approaches are very effective (Lang, 2007).

In the long-term individual level approaches are usually not sustainable (Lemmens, V., Oenema, Klepp Henriksen and Brug, 2008). Moreover, providing risk factor information is usually most accessible to the best educated. Thus, an exclusive focus on social marketing campaigns would effectively discriminate against educationally disadvantaged groups (Wikler, 2002). In addition, social marketing campaigns to reduce obesity raise concerns because they focus on body shape and size (Wall et al., 2011). "Many sociologists claim that late modern social agents are increasingly preoccupied with their bodies and with the pursuit of bodily perfection through diet, exercise" (Crossley, 2004, p.222). In body-conscious societies women are under immense pressure to be slim. It is therefore vital to design anti-obesity messages very carefully, and, in particular, ensure that female adolescents do not acquire distorted expectations of their body image (Adler, 2009; Puhl and Latner, 2007). These issues could be the subject of another paper in the future.

In sum, obesity imposes enormous social costs. A paradigm shift is needed to prevent obesity at the population level. Obesity prevention should focus on structural and policy-related changes to the environment rather than interventions targeted to changing individual behavior. Greater knowledge of food and diet is not enough to counter inequality. The problem will not be solved unless adequate attention is given to the quality of food available to people, and the provision of public spaces and

recreational facilities. “Blaming the victim” and constantly trying to change the eating behavior of individual families is not a sustainable or realistic strategy. Behavioral justice should also be an important element of programs: people cannot be expected to eat healthy food if it is not available, affordable or accessible to their community. The notion of 'behavioral justice' includes individual responsibility for health-promoting conduct but holds each actor accountable provided that they have sufficient resources to do what is expected of them. From this standpoint, individuals are expected to exercise agency and accountability and society is expected to provide an environment that promotes health. A sociological perspective provides tools to analyze and understand the interplay of social determinants of obesity. Future studies should focus on the dynamic interactions between macro and micro-level influences.

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