

# Implementing Policies to Combat Obesity in Turkey



**WORLD BANK GROUP**



## PROJECT DATA

### PARTNER ORGANIZATION:

World Bank

### ORGANIZATION TYPE:

Multilateral

### DELIVERY CHALLENGES:

stakeholder engagement;  
organizational capacity

### DEVELOPMENT CHALLENGE:

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Control of Obesity

### SECTOR:

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## TABLE OF CONTENTS

Introduction . . . . .	2
Development Challenge: Confronting Childhood Obesity . . . . .	3
Delivery Challenges: Stakeholder Engagement and Organizational Capacity . . . . .	3
Background . . . . .	4
Tracing the Implementation Process . . . . .	8
Lessons Learned . . . . .	20
References . . . . .	24
Annex 1: Timeline of Events . . . . .	26
Annex 2: Process Mapping Diagram . . . . .	28
Annex 3: Interview Questions . . . . .	29
Annex 4: Physical Fitness Scorecard for Health Program Implementation . . . . .	30
Annex 5: MoH's Timeline of Activities for School Based Interventions against Obesity . . . . .	31
Annex 6: List of Interviewees . . . . .	32

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## Preface

The soaring prevalence of obesity, and the non-communicable diseases (NCDs) associated with it, is increasingly becoming one of the main public health threats in the world. Once considered an ailment of the rich, overweight and obesity are no longer a health concern only in wealthy countries. Their prevalence continues to grow in low- and lower-middle-income countries (LMICs), and is pervasive even in countries where undernutrition persists.

To face this challenge, many countries have designed and implemented comprehensive strategies and standalone policies to curb the epidemic. However, most documentation around the process to design and implement these policies come from high-income countries, and only recently have there been some efforts aimed at understanding the process and experiences in middle-income countries. This work aims to help fill this knowledge gap.

This case study is part of a series of country case studies commissioned to better understand the process of designing and implementing policies to prevent and control obesity. The series provides an overview of the contextual factors and political processes in which these policies were introduced and the roles of the stakeholders in moving the policies forward from design to implementation. The countries included in the series span World Bank regions and income levels, including Brazil, Chile, India, Mexico, Poland, Thailand, Turkey, Sri Lanka, and South Africa.

The nine case studies were developed utilizing a case-study methodology developed by the Global Delivery Initiative (GDI). GDI is a collaborative effort

to create a collective and cumulative evidence base of delivery know-how to inform development practice and improve implementation. For each case study, the methodology was tailored to highlight the factors that supported and hindered the design and implementation of obesity prevention policies in each individual country. This series aims to answer three key questions within the analysis: (1) *the development challenge*, the overall problem the country was aiming to solve; (2) *the delivery challenge*, the experiences that hindered the policy design and implementation from achieving its full potential; and (3) *the inflection points* that stalled or progressed the momentum gained throughout the process.

Each case study is based on peer-reviewed literature, publicly available government documents, a review of mass media advocacy campaigns, and in-person qualitative interviews with a broad range of key stakeholders.

Maria Eugenia Bonilla-Chacin

## Introduction

Comparable to the global trend, obesity is on the rise in Turkey. A number of environmental and societal developments including rapid urbanization, changing transportation means, shifts in preferences, and changes in behaviors concerning dietary and physical activity habits contribute to the growth of the problem. Various studies conducted in Turkey (See Turkish Demographic Health Surveys between 1993–2013, Turkish Diabetes Epidemiologic Studies of 2002 and 2011, Turkey Health Nutrition Survey of 2010 and Turkey Childhood Obesity Surveillance Initiative study of 2013) highlight the increased obesity prevalence for the overall population but trends among the young population (children and adolescents) are particularly worrying. Increasing prevalence of obesity increases the disease burden resulting from obesity itself and from diet-related non-communicable diseases (NCDs).

The Ministry of Health of Turkey (MoH), being aware of the obesity progression in the country and closely following and aligning with the international agenda on obesity, developed the Healthy Nutrition and Active Life (HNAL) Program in 2010, with a particular emphasis on the prevention and control of obesity among children and adolescents. This pressing need to combat obesity and particularly to reverse the increasing obesity trend

also led the Turkish government to focus on children and adolescents through school-based interventions, as the health status of this age group has implications on the disease burden in the future.

The basis of the MOH's decision to focus on the young population and to prioritize school-based interventions are twofold. First, Turkey closely follows and adheres to the aspirations and action plans of the international community that emphasize young population as the priority group and highlights the importance of school-based interventions.<sup>1</sup> Second, at the national level, the scientific and operational work and efforts of universities and non-governmental organizations (NGOs) as well as the decisions of MoH's Scientific Commissions are taken into consideration while prioritizing population groups and the specific obesity control interventions and policies.

This case study focuses on two school-based interventions that were initiated by the MoH to decrease the environmental obesogenic influences on children and adolescents: The Circular for Food and Drink Sales in School Canteens, and the Physical Fitness Scorecard for Health. The Circular attempts to provide a framework and guidelines for the kind of food that could be sold in school canteens, with the goal of discouraging the sale of high-calorie foods, sugar-sweetened beverages, and other foods perceived as unhealthy. The Scorecard program, which was initially piloted in Ankara and is currently being scaled up nationwide, attempts to encourage increased physical activity among children in secondary schools and high schools through personalized schemes. The case study aims to explore the factors which led the government to focus on fighting and controlling obesity for children and adolescents by prioritizing the

1 WHO World Health Assembly resolutions (66<sup>th</sup> WHA resolution (May 2013, [http://apps.who.int/gb/ebwha/pdf\\_files/WHA66-REC1/WHA66\\_2013\\_REC1\\_complete.pdf](http://apps.who.int/gb/ebwha/pdf_files/WHA66-REC1/WHA66_2013_REC1_complete.pdf)) and 69<sup>th</sup> WHA resolution of (May 2016, <http://www.who.int/mediacentre/news/releases/2016/wha69-27-may-2016/en/>) emphasize the importance to address childhood obesity), 2011 UN General Assembly High Level Meeting on NCDs ([http://www.un.org/en/ga/search/view\\_doc.asp?symbol=A/66/83&Lang=E](http://www.un.org/en/ga/search/view_doc.asp?symbol=A/66/83&Lang=E)), WHO's 2008-2013 Action Plan for the Global Strategy for the Prevention and Control of NCDs ([http://apps.who.int/iris/bitstream/10665/44009/1/9789241597418\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/44009/1/9789241597418_eng.pdf)), WHO's 2013-2020 Global Action Plan for the Prevention and Control of NCDs ([http://apps.who.int/iris/bitstream/10665/94384/1/9789241506236\\_eng.pdf?ua=1](http://apps.who.int/iris/bitstream/10665/94384/1/9789241506236_eng.pdf?ua=1)), FAO/WHO Second International Conference on Nutrition (November 2014, <http://www.fao.org/3/a-mn236e.pdf>) and 2014 Vienna Declaration on Nutrition and Non-communicable Diseases in the Context of Health 2020 ([http://www.euro.who.int/\\_\\_data/assets/pdf\\_file/0003/234381/Vienna-Declaration-on-Nutrition-and-Noncommunicable-Diseases-in-the-Context-of-Health-2020-Eng.pdf?ua=1](http://www.euro.who.int/__data/assets/pdf_file/0003/234381/Vienna-Declaration-on-Nutrition-and-Noncommunicable-Diseases-in-the-Context-of-Health-2020-Eng.pdf?ua=1)) are the main reference points for Turkey's decision to focus on the young population and school-based interventions.

interventions in schools; it focuses on the interventions described above, and examines the obstacles faced during implementation (delivery challenges), the position and engagement of involved stakeholders, and how their position influenced the design and implementation of the interventions. As such, this case study also aspires to provide real-life insight, evidence, and lessons to countries who are considering developing, implementing, and scaling up effective programs for the prevention and control of overweight and obesity.

## Development Challenge: Confronting Childhood Obesity

Rapidly changing dietary habits and decreasing physical activity levels of children and adolescents lead to increased obesity prevalence in the country. These changes are driven by a complex mix of factors, including high urbanization, increases in sedentary lifestyles, shifts in dietary preferences towards high-energy, high-sugar, and high-fat content food and drinks, as well as low awareness about healthy nutrition and lifestyles (Vasanti et al. 2013). These contextual factors affect the onset and the progression of obesity both in children and adolescents and in adults.

While there is no national study on how childhood obesity affects obesity and NCDs in adulthood, international studies highlight the adverse implications of childhood obesity on adult health status. In fact, the adverse health consequences of child and adolescent overweight and obesity (such as cardiovascular diseases, diabetes and certain types of cancer) largely emerge at adulthood (WHO n.d.). A study by Singh et al. (2008) suggests that the probability of overweight and obese adults to develop chronic diseases is higher if these people were also overweight or obese in childhood.<sup>2</sup> A study by Hennon et al. (2005) suggests that obesity has led to an increase in type 2 diabetes incidence among children and adolescents since mid-1980s. The study also highlights the strong association between obesity and insulin resistance and the development of overt type 2 diabetes if these factors are combined with relative insulin deficiency. Additionally, the likelihood

of premature death and disability in adulthood is higher among individuals whose conditions of overweight or obesity started from a younger age (Must et al., 1999).<sup>3</sup>

## Delivery Challenges: Stakeholder Engagement and Organizational Capacity

Considering the significant adverse health implications of childhood and adolescent obesity, the Turkish Government's interventions and policies that target children and adolescents in order to curb the rise in obesity prevalence increase are a good start. Yet these programs have faced a number of **implementation challenges**, mostly centered around population and stakeholder awareness, stakeholder engagement, organizational capacity, and basic infrastructure. These challenges are being addressed by maintaining the lines of communication with the stakeholders to foster collaboration, by delegating greater responsibility to the implementing actors, and by intensifying organizational capacity building.

Concerning the Circular on the Hygienic Control of School Canteens and of Food and Drink Sales in School Canteens (henceforth referred to as **The Circular for Food and Drink Sales in School Canteens or the circular**), **one significant implementation challenge was the neutral position and weak engagement of some stakeholders** (specifically head teachers, teachers, canteen operators, and parents) which affected the public sector's position vis-à-vis the oppositions from various actors. This low engagement also slowed the dialogue between involved actors, necessary to develop viable solutions to implement the circular in the field. **A second important implementation challenge was the low awareness about healthy nutrition** which created several means to bypass the restrictions of the circular thus limiting its intended impact. **Through the introduction of the circular, a gap emerged on both the demand and supply side for food and beverage products—another challenge** highlighting the necessity to have products that both comply with

2 The risk of overweight in adulthood based on overweight in childhood or adolescence is approximately 2–10 and the same study suggests that 30 percent of obese adults were obese in their childhood.

3 The study suggests that persistence of obesity present in childhood or adolescence into adulthood has been consistently demonstrated in all populations in which this issue has been studied. It also indicates that 25 to 50 percent of individuals who are obese in adolescence remain obese in adulthood (Garn 1985 and Charney et al. 1976).

the regulations and meet customers' preferences. Finally, **the monitoring and supervisory roles and responsibilities stated in the circular** were additional challenges to be addressed in order to facilitate proper program operation and oversight, particularly in terms of setting effective accountability mechanisms.

For the Physical Fitness Scorecard for Health program, **one important implementation challenge is to improve the human resource capacity and skills nationwide to collect and enter data following standard procedures and compliance with the relevant curriculum.** Maintaining a robust database infrastructure would ensure proper and reliable data collection, analysis, and interpretation and would support and facilitate future policy design and decision making. **Another implementation challenge is related to the sustainability of the program and the genuine commitment and engagement of the teachers** as the program success will largely depend on how effectively the program is carried out in the field.

## Background

The epidemiologic transition as well as the factors discussed in the introduction section have contributed to the increase of obesity in Turkey. In fact, various national studies conducted highlight this increase across the overall population but trends for some population segments, such as among children and adolescents, are particularly worrying (Table 1) as the disease burden associated with obesity as well as with nutrition-related chronic diseases among this population continues to worsen. Overweight and obesity are among the leading risk factors for a number of NCDs including cardiovascular diseases, diabetes, and certain cancer types. The onset and progression of obesity in childhood and adolescence does, for the most part, result in a higher likelihood of sustained obesity in adulthood and also increases the likelihood of developing NCDs (WHO 2016).

In addition to epidemiologic changes, a number of environmental and societal developments have led to significant shifts in dietary preferences and physical activity habits behaviors in Turkey. Energy-dense, high-fat food intake has increased, and physical activity levels have decreased as a result of the rise in sedentary work, of changing transportation modalities, and of increased urbanization (WHO, Obesity and overweight

2016). This contributed to the overweight and obesity progression nationally as obesity and overweight are mainly the results of an energy imbalance between the calorie intake and calorie expenditure. The challenge is often exacerbated by the lack of supportive policies and preventive measures in various sectors including health, agriculture, transport, urban planning, municipal sector, environment, food processing, distribution, marketing, and education (WHO, Obesity and overweight 2016).

An important contextual factor contributing to the rise of obesity is high urbanization. While less than half of the Turkish population lived in urban areas before 1980s, the urbanization rate increased, starting in the mid-1980s and has continued. Currently more than 73 percent of the population live in urban areas<sup>4</sup> (Figure 1, World Development Indicators, 2017).

Changes in lifestyle also contribute to increased obesity rates. The 2010 Turkey Nutrition and Health Survey (TBSA 2010)<sup>5</sup> suggests that 79.8 percent of the male population (19 years and older) and 81.4 percent of the female population (19 years and older) have sedentary lifestyles according to physical activity level (PAL) classification. The same study indicates that 71.9 percent of the 12+ age population did not engage in any physical activity lasting 30 minutes or longer in the last seven days prior to the time when the survey was conducted. The same study found that children in the 6–11 age group spend an average of 6 hours per week day with sedentary activities and 6.4 hours per weekend day with sedentary activities. Of these children, 58.4 percent did not engage in any daily 30+ minute exercise. The situation is also worrying even for children ages 2 to 5 as 9.4 percent of them spend more than 6 hours during week days engaged in screen time and 7.4 percent of them spend more than 6 hours engaged in screen time during weekends. Children in this age group were found to have an average of 3.5 sedentary hours per day.

A complementary factor to changing lifestyles are changing dietary habits. The Nutrition Country Profile

4 A recent bulletin of TURKSTAT (31 January 2017) indicates that in 2016, 92.3 percent of the population are living in provinces (il) and districts (ilçe). <http://www.tuik.gov.tr/PreHaberBultenleri.do?id=24638>.

5 TBSA 2010 is the first nationwide survey to be conducted on regular intervals in Turkey. Earlier studies on nutrition date back to 1974 (Orhan Koksak, National nutrition – health and food consumption survey of Turkey 1974), to 1984 (Tonuk B. et al. 1984 Food Consumption and Nutrition) and to 1997 (Hacettepe University/Ministry of Health - Food Consumption Survey in 7 Provinces). The surveys have different designs, methodologies and scopes, therefore historical data is not comparable.

developed by Pekcan and Marcheish (2001) suggests that in the 2000s, Turkish people appear to be well nourished and the average diet is adequate to meet recommended daily intake of energy. The report highlights that the nutritional patterns are mostly affected with income level and degree of lack of knowledge on healthy nutrition. The report also indicates that obesity is more prevalent in urban areas together with NCDs where sedentary lifestyle is the main risk factor.

Research almost a decade later, however, suggests worsening trends in dietary habits. The TBSA 2010 findings highlight that neither adults nor children have ideal/healthy nutritional habits: **(1)** Of children in the 6–11 age group, 10.8 percent skip breakfast and 9.1

percent skip lunch; 14.2 percent of 12+ age population skip breakfast and 17.8 percent skip lunch. **(2)** In the adult population (19+ age) 44.6 percent do not consume milk, 46.6 percent consume dry legumes only once or twice a week,<sup>6</sup> 23.4 percent do not consume any nuts and seeds, only 47.6 percent daily consume fresh fruit and vegetables, 38.4 percent do not consume citrus fruits, 60.5 percent do not consume any dried fruits. **(3)** TBSA 2010 also suggests prominent unhealthy nutrition habits among adult population: 7.9 percent consume packaged/

6 The WHO dietary guidelines recommend several daily intakes of dry legumes. [http://www.euro.who.int/\\_\\_data/assets/pdf\\_file/0010/119926/E70041.pdf](http://www.euro.who.int/__data/assets/pdf_file/0010/119926/E70041.pdf). [http://applications.emro.who.int/dsaf/emropub\\_2011\\_1274.pdf](http://applications.emro.who.int/dsaf/emropub_2011_1274.pdf).

**Table 1 Main findings of obesity and NCD-related national surveys in Turkey**

Survey	Main Findings
Turkish Demographic Health Surveys (TDHS) <sup>a</sup>	<ul style="list-style-type: none"> <li>Obesity prevalence among women of age 15-49: 1993: 32 percent overweight and 19 percent obese</li> <li>1998: 33 percent overweight and 19 percent obese</li> <li>2003: 34 percent overweight and 23 percent obese</li> <li>2008: 34 percent overweight and 24 percent obese</li> <li>2013: 28 percent overweight and 27 percent obese</li> <li>Under five obesity/overweight prevalence in 2013: 11 percent</li> </ul>
Turkey Obesity and Hypertension Survey <sup>b</sup> (TOHTA)	<ul style="list-style-type: none"> <li>Obesity prevalence for women in 1999: 35.4 percent</li> <li>The risk is 1.8 times higher for women than it is for men</li> </ul>
Turkish Diabetes Epidemiological Studies (TURDEP <sup>c</sup> I in 2002 and TURDEP II in 2011)	<p>Rate of change in obesity and obesity-related NCDs prevalence for adults between 2002 and 2011:</p> <ul style="list-style-type: none"> <li>Diabetes in adult population: 90 percent increase (from 7.2 percent to 13.7 percent)</li> <li>Obesity in adult population: 40 percent increase (from 22 percent to 31.2 percent)</li> <li>High body mass index (BMI) is associated with the increased prevalence of diabetes for both genders</li> <li>In women: age, waist circumference, BMI, hypertension, low education level, and living environment; and in men: age, BMI and hypertension are independently associated with an increased prevalence of diabetes</li> </ul>
Ministry of Health's (MoH) 2004 Burden of Disease study <sup>d</sup>	<ul style="list-style-type: none"> <li>Disease burden attributable to high BMI is 7.3 percent of the total disease burden (in DALYs)</li> <li>Sufficient physical activity levels can avert 4.3 percent of the related NCD disease burden (ischemic heart disease, ischemic stroke, and diabetes)</li> </ul>
Turkey Health Nutrition Survey of 2010	<ul style="list-style-type: none"> <li>58.4 percent of children of age 6–11 do not engage in regular physical activity<sup>e</sup></li> <li>Prevalence of obesity for the 6–18 age population: 8.2 percent</li> <li>Prevalence of overweight for the 6–18 age population: 14.3 percent<sup>f</sup></li> <li>Obesity prevalence for 19+ population: 30.3 percent (20.5 percent for males and 41 percent for females)</li> <li>Obesity prevalence for children 0-5 age: 8.5 percent (10.1 percent for boys and 6.8 percent for girls)</li> </ul>
Chronic Diseases and Risk Factor Survey in Turkey 2013, <sup>g</sup>	<p>Findings of a regression analysis based on the data from the Survey</p> <ul style="list-style-type: none"> <li>Overweight and obesity is a concern country-wide</li> <li>Socioeconomic status is strongly related with the obesity prevalence: people with low educational attainment and unemployed women (housewives) are the most likely to be affected</li> </ul>
Turkey Surveillance on Growth Monitoring in School Aged Children in Turkey (TOCBI study) 2009	<ul style="list-style-type: none"> <li>Obesity prevalence for children of 6-10 age group: 6.5 percent</li> <li>Overweight prevalence for children of 6-10 age group: 14.3 percent</li> </ul>

(continued on next page)

**Table 1 Main findings of obesity and NCD-related national surveys in Turkey** (continued)

Survey	Main Findings
Turkey Childhood Obesity Surveillance Initiative (COSI-TUR-2013) survey <sup>h</sup>	<p>Increase for obesity and overweight since TOCBI (broad comparison): from 20.8 percent for the 6-9 years age group to 22.5 percent for the 7-8 years age group</p> <p>Other findings:</p> <ul style="list-style-type: none"> <li>• The average duration of gym class at schools: only 1.5 hours per week</li> <li>• Only 42.8 percent of children consume fresh fruit every day</li> <li>• 18.3 percent consume fresh vegetables daily</li> <li>• Half of the children consume soft drinks (carbonated beverages and beverages with sugar content) and fully processed fruit juice 1 to 3 times a week</li> <li>• Only 8.8 percent consume legumes every day</li> <li>• Chips and popcorn are consumed by 59.6 percent of children 1 to 3 times a week</li> <li>• Candy bars and chocolate are consumed by 55.8 percent of children 1 to 3 times a week</li> <li>• Biscuits, muffins, cakes and cookies are consumed by 53.6 percent of children 1 to 3 times a week</li> <li>• Pizza, Turkish pizza, pitta, French fries and hamburgers are consumed 1 to 3 times a week by 66.1 percent of children</li> <li>• 74.2 percent of all children do not participate in any sport, physical activity, or dance clubs</li> <li>• More than half of the children spend 1 or 2 hours per day watching TV (61.3 percent during week days and 49.8 percent during weekends)</li> <li>• In urban settings, 22.8 percent spend 1 hour or longer in front of a computer during week and 40.8 percent during weekends</li> <li>• According to BAZ score<sup>i</sup>, 14.2 percent of children are overweight and 8.3 percent are obese</li> <li>• Obesity prevalence is highest in regions with high urbanization and economic development (Istanbul 14.9 percent, Aegean 12.7 percent, West Anatolia 11.7 percent, and Central Anatolia 11.9 percent)<sup>j</sup></li> </ul>

<sup>a</sup> Under-5 obesity/overweight has been presented for the first time in the 2013 TDHS. In earlier surveys (TDHS), nutritional status of children has been assessed through anthropometric measures on weight and height, more specifically for wasting and stunting. As the obesity and overweight have been indicated among the problems concerning children in addition to malnutrition, the 2013 TDHS included obesity/overweight data for under-5 children.

<sup>b</sup> TOHTA study has been conducted only once, between 1999 and 2000.

<sup>c</sup> TURDEP stands for Turkey Diabetes, Hypertension, Obesity and Endocrinological Diseases Prevalence Studies.

<sup>d</sup> Data taken from MoH Healthy Nutrition and Active Life Program 2014-2017.

<sup>e</sup> For this age group, regular physical activity is defined as the daily physical activity which lasts 30 minutes or more.

<sup>f</sup> Data taken from MoH Healthy Nutrition and Active Life Program 2014-2017.

<sup>g</sup> Regression analysis (2015, unpublished) by Belgin Unal, Ulger Aydogan, and Safir Sumer.

<sup>h</sup> Established by the WHO Regional Office for Europe in order to generate data on prevalence and trends in overweight and obesity to enhance understanding of childhood obesity trends and to permit inter-country comparisons within the European Region.

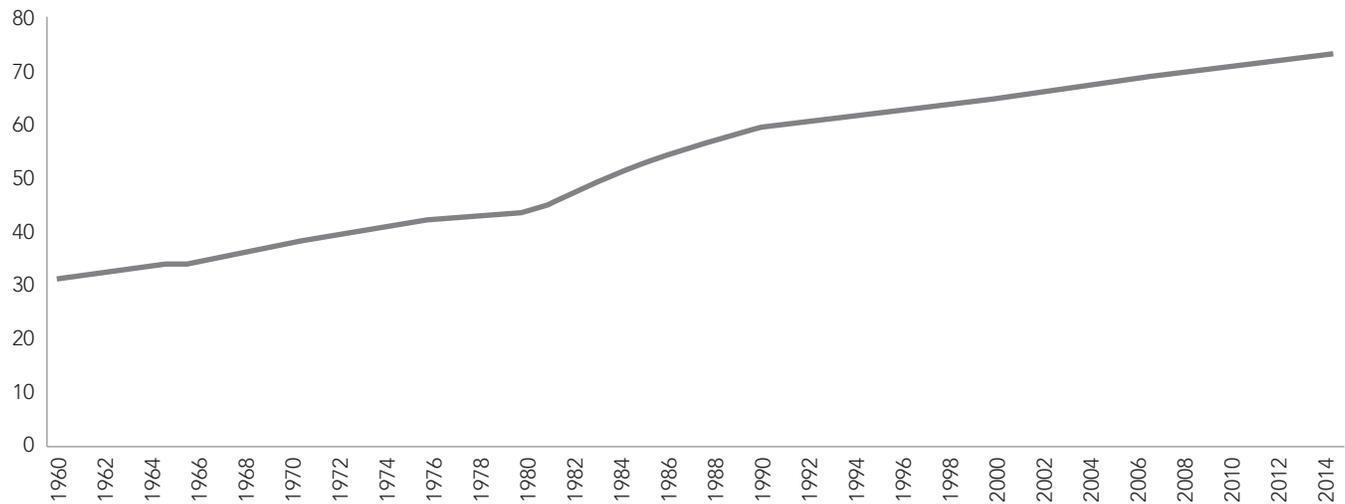
<sup>i</sup> BMI for age Z-score: Body mass index for age z-scores, also called BMI standard deviation scores, are measures of relative weight adjusted for child age (<http://www.nature.com/ijo/journal/v30/n4/full/0803300a.html>) Must et al., *International Journal of Obesity* (2006) 30, 590-594. doi:10.1038/sj.ijo.0803300.

<sup>j</sup> The regions in concern are located in the western and central-western part of Turkey. These regions have a high socioeconomic development index, (Ministry of Development 2013, <http://www.kalkinma.gov.tr/Lists/Yaynlar/Attachments/548/SEGE-2011.pdf>, page 52).

processed fruit juice every day, 11.7 percent consume carbonated beverages every day, 55.5 percent consume sugar, honey, jam and molasses every day, 19.3 percent consume confectionery sweets and chocolate once every week and 12.1 percent once every two weeks, 8.3 percent consume chips once or twice a week, and 25.4 percent consume dough desserts once or twice a week. These findings suggest that healthy food consumption among the population is insufficient and there is an important pattern of consuming high calorie food and drinks. Additionally, the interviewees from the MoH also suggest that the total and saturated fat consumption among population is high.

Finally, low socioeconomic status is another important factor exacerbating obesity onset and progression. As has been highlighted previously in Table 1, people who are socioeconomically disadvantaged in Turkey and women (specifically those unemployed and with low educational attainment) are among the population segments to be adversely affected by obesity.<sup>7</sup> The onset and progression

<sup>7</sup> Regression analysis (2015, unpublished) by Belgin Unal, Ulger Aydogan and Safir Sumer based on Chronic Diseases and Risk Factor Survey in Turkey 2013. The regression analysis carried out based on the survey data suggests that the likelihood to be overweight and obese is higher for the housewives (age and gender adjusted OR is 2.664 for overweight and age and gender adjusted OR is 2.228 for obesity).

**Figure 1 Turkish Population Residing in Urban Areas (Percent of Total), 1960–2014**

Source: World Development Indicators<sup>a</sup>, The World Bank.

<sup>a</sup> [http://data.worldbank.org/indicator/SP.URB.TOTL.IN.ZS?locations=TR&name\\_desc=true](http://data.worldbank.org/indicator/SP.URB.TOTL.IN.ZS?locations=TR&name_desc=true).

of obesity not only affect the women themselves but have implications on mother and child health, specifically for healthy nutrition of children and child education on healthy nutritional habits (O'Reilly and Reynolds 2013).

With a worsening picture in the country for the obesity progression and its adverse future implications on the health system and health status, the government of Turkey was aware of the need to control and fight obesity.<sup>8</sup> A first prominent step was a high-level commitment at the prime ministry level to host the **World Health Organization (WHO) European Ministerial Conference on Counteracting Obesity**, held by the WHO Regional Office for Europe in 2006 in Istanbul.<sup>9</sup> The need to be informed about and learn from other countries' experiences on obesity and the need to take planned action with the increasing evidence on rising obesity in the country were the main factors which prompted Turkey to host this conference. Turkey

mainly contributed to the discussions on intersectoral work and multi-stakeholder actions with a specific focus on urban life and changing lifestyles and the need to promote physical activity in urban settings. Turkey also actively took part in drafting the European Charter on Counteracting Obesity (WHO 2006), a joint formal statement issued at the end of the conference.

The Conference was a milestone for participating countries/states<sup>10</sup> to show commitment at the highest political level through the adoption of the European Charter on Counteracting Obesity. The Charter's main focus was to explore means to translate that political commitment into action. The Conference report highlights that the priority should be on children and people with lower socioeconomic status, on reducing the environmental obesogenic influences, particularly around families, schools, and kindergartens (WHO, European **Ministerial Conference on Counteracting Obesity** Conference Report 2007). For this target group in particular, the exchange of information among countries during the conference also highlighted the importance of multi-sectoral actions, early prevention and action on the marketing of foods and school-based

<sup>8</sup> The timeline of activities concerning the efforts to control and fight obesity appears in Annex 1 and Annex 5.

<sup>9</sup> In September 2005 during the WHO Regional Committee for Europe, Turkey committed to host an obesity conference in Turkey in 2006 and the WHO's Standing Committee of the Regional Committee had endorsed Turkey's proposal to hold a conference in Turkey (<http://apps.who.int/iris/bitstream/10665/107675/1/E87698.pdf>) and ([http://www.euro.who.int/\\_\\_data/assets/pdf\\_file/0018/102384/fs1305e.pdf](http://www.euro.who.int/__data/assets/pdf_file/0018/102384/fs1305e.pdf)).

<sup>10</sup> The conference was attended by high-level delegations from 46 Member States in the WHO European Region.

interventions. Turkey was among the Charter signatories, therefore acknowledging the increasing obesity trend as alarming among children and adolescents and committing to the Charter's ultimate goal to curb the obesity epidemic and reverse the trend in the European Region through targeted interventions.

Turkey's commitment to the Charter to fight and reverse the increasing trend for obesity has been translated into a concrete action plan with the development of the Healthy Nutrition and Active Life (HNAL) Program in 2010. The program has been developed by MoH with contributions from other stakeholders, including MoNE, MoA, academia, professional associations such as Turkish Society of Cardiology, Turkish Society of Endocrinology and Metabolism, Turkish Society of Dietitians, and Turkish Obesity Research Association. While MoH generally monitors HNAL, independent monitoring by external parties also takes place (WHO, Turkish Healthy Nutrition and Active Life Programme 2010–2014 and related initiatives (2016). Initially, the program had been promoted as a *program to counteract obesity* in the media and the first edition was published with the title *'Turkey Obesity Control Program 2010–2014'*. The program title was ultimately revised later in 2010 to *'Healthy Nutrition and Active Life Program of Turkey'* to better reflect the comprehensive scope of the program, and it was published in the Official Gazette No. 27714 in September of the same year. HNAL program has incorporated amendments over time and is currently ongoing. The main pillars of action in the HNAL program are in line with the Charter's recommendations and aim to: (1) improve equitable access to basic healthy foods for a balanced and healthy diet; (2) allocate resources (by all involved sectors) to fight obesity and to include fighting obesity in their plans; (3) make an in-depth analysis of the current obesity situation in Turkey for different population groups; and (4) establish a M&E system to regularly track obesity progression in Turkey.

should be children and adolescents. As results of some national studies also supported this global issue, Turkey was ready to intensify efforts for the children and adolescents: in addition to targeting the general population, the HNAL program included policies and interventions specifically for children and adolescents as part of the government's commitment to specifically focus on this population. To this end, the Turkey Childhood Obesity Surveillance Initiative (COSI-2013) study also played an important role in shaping and prioritizing HNAL interventions as well as enhancing inter-ministerial collaboration.

Firstly, the findings of the COSI study were used to improve health policies and COSI is now included in the HNAL as a regular surveillance and monitoring mechanism.<sup>11</sup> Two prominent findings of the COSI survey were the high consumption of unhealthy foods and the insufficient levels of physical activity. These findings were among the main drivers to initiate a number of measures/programs to prevent and control obesity. On the health system level, these initiatives include the development of national physical activity guidelines,<sup>12</sup> national nutrition guidelines, and corresponding physical activity and nutrition pyramids for Turkey. In addition, these initiatives led to the development of obesity diagnosis and treatment guidelines for children and adolescents at the primary care level and the development of the 2010–2014 Turkish Action Plan to Prevent and Control Childhood Obesity<sup>13</sup> as well as its update for 2014–2017. Specific efforts targeting school children include the Physical Fitness Scorecard for Health, the Nutrition Friendly Schools Program, the School Milk Program, School Canteen Regulations, Teacher's Manual for Healthy Nutrition and Physical Activity and Guidelines for Menu Preparation for Boarding Schools and for Schools Who Serve Lunch. In addition to these efforts, a collaboration protocol (a binding agreement that guides cooperation)<sup>14</sup> between MoH and the Ministry of National Education (MoNE) on School Health aims to develop and implement a 'School

## Tracing the Implementation Process

### COSI Survey and Increased Policy Focus on Children and Adolescents

During the WHO's Ministerial Conference, it has been emphasized that the priority target group in fighting obesity

11 COSI 2016 has been conducted recently and its data analysis stage is currently ongoing.

12 These guidelines are among practices considered as the *best buys* by WHO and are recommended to governments. MoH has also taken into consideration the implementation of these guidelines during a ministerial workshop conducted during October 2012.

13 The Turkish action plan takes the EU Action Plan to Prevent and Control Childhood Obesity as a reference but adopts and updates it with respect to Turkish context.

14 This protocol already exists (not a new one) to frame the collaborative work between MoH and MoNE. But in time, it evolves with the addition of new content and scope.

Health Model' where two of the main pillars focus on healthy nutrition and physical activity.

Secondly, it is important to note that the COSI study was imperative to raise awareness among the MoNE on the increasing obesity prevalence nationally and helped to establish a stronger and more committed collaboration effort between MoH and MoNE. With COSI, the issue of promoting physical activity among young population has become an important agenda item for MoNE, and MoNE actively engaged to support the program and to extend their database and include physical fitness scorecard for health program data into the database. It is important to note that COSI results were imperative to providing concrete evidence in order to understand the importance of the matter.<sup>15</sup> **The Education and Training Council of MoNE approved the Physical Fitness Scorecard for Health Program in 2016.** MoNE has also started to support the data collection and entry of the scorecard program into the MoNE database. COSI results also led MoNE to support the implementation of the School Canteen Circular for Food and Drink Sales. Additionally, MoNE uses the results of COSI as scientific evidence against the claims of the food and beverage sector in the judicial processes.

## Policies and Interventions Addressing Children and Adolescents

Because children are an important target group of the HNAL Program,<sup>16</sup> establishing healthy environments within schools becomes an important element of the program.<sup>17</sup> One important effort to address the challenge of creating such healthy environments is the development and implementation of a circular which sets forth the criteria to sell food and drinks in school canteens.

## The Circular for Food and Drink Sales in School Canteens<sup>18</sup>

The **Circular for Food and Drink Sales in School Canteens** (MoNE 2007) is an initiative where the main stakeholders are MoH, MoNE through parent-school

associations (PSAs), Ministry of Food, Agriculture and Livestock (MoA), canteen operators, and food and beverage sector. MoNE, provincial directorates of national education, school administrations, parent-school associations, teachers, and canteen operators are responsible for the implementation of the circular. Annex 2 of the circular sets forth the rules for the permitted sale of select food and drink products in school canteens. The circular covers all schools and institutions under the scope of MoNE except for universities and the implementation is mandatory. The initial circular dates back to 2007 (MoNE 2007), which stated<sup>19</sup> that a clause will be added to the contracts of the school canteen operators to discourage the sale of high energy drinks, soft drinks, aromatic drinks, chips, and snacks that might contribute to unhealthy nutrition and obesity. The circular also recommended that another clause to be added to the contracts to encourage the sale of healthy foods and drinks such as milk, salty yogurt drink, fruit and vegetable juice, fresh fruit, and vegetables. According to the circular, school management can end canteen operators' contracts<sup>20</sup> in case of non-compliance with the circular.

The scope of the circular and the food and drink standards for products to be sold in school canteens have been extended in time. Two milestones that influenced the drafting and implementation of a circular to monitor school canteens are (1) the European **Ministerial Conference on Counteracting Obesity and Turkey's commitment for the resulting Charter and (2) (based on this commitment)** the MoH Scientific Commission's<sup>21</sup> advice dated 22 March 2007 on limiting/discouraging the sale of foods and drinks which lead to unhealthy nutrition and obesity.

Updating the school canteen circular is an activity defined in HNAL. The updates are done by the MoH's

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the rules for food security and hygiene for places like school canteens and cafeterias. Annex 2 of the Circular sets forth the rules and criteria (prepared by the MoH's School Health Scientific Commission) for the permitted sale of select food and drink products in school canteens and cafeterias. Annex 3 of the Circular incorporates the control and inspection form that will be used during the control and audit of such places.

15 Author interview with MoH interviewees, 05.05.2017.

16 The Ministry of Health of the Republic of Turkey. 2013. **Healthy Nutrition and Active Life Program**, [http://beslenme.gov.tr/content/files/yayinlar/turkiye\\_sagliklibeslenme\\_ve\\_hareketli\\_hayat\\_programi.2014\\_2017.pdf](http://beslenme.gov.tr/content/files/yayinlar/turkiye_sagliklibeslenme_ve_hareketli_hayat_programi.2014_2017.pdf) (page 28).

17 The Ministry of Health of the Republic of Turkey. 2013. **Healthy Nutrition and Active Life Program**, [http://beslenme.gov.tr/content/files/yayinlar/turkiye\\_sagliklibeslenme\\_ve\\_hareketli\\_hayat\\_programi.2014\\_2017.pdf](http://beslenme.gov.tr/content/files/yayinlar/turkiye_sagliklibeslenme_ve_hareketli_hayat_programi.2014_2017.pdf) (page 37, page 58 and page 60).

18 The Circular is a multi-stakeholder effort involving MoNE, MoH (the School Health Scientific Commission) and MoA. Annex 1 of the Circular sets forth

19 The provisions of recommended circulars are not mandatory, but are recommended to be implemented.

20 Contract termination is based on clause 22 of the Regulation of the Parent-School Associations (<http://www.resmigazete.gov.tr/eskiler/2012/02/20120209-6.htm>).

21 As per the feedback from the interviewees of the MoH, the commission currently includes experts from Ankara University, Hacettepe University, Gazi University, and Istanbul University in the fields of endocrinology, nephrology, oncology, gastroenterology, social pediatry, public health, children and adolescent mental health, infection sciences, nutrition and dietetics, food engineering, dentistry, child development, physiotherapy, and rehabilitation.

School Health Scientific Commission and MoNE, based on scientific research, international best practices, guidance from the international community including WHO, European Union (EU), Centers for Disease Control and Prevention (CDC), and the Institute of Medicine (IOM), as well as other country examples such as the Australia National Healthy School Canteens Pocket Guide. MoNE's Circular 2011–41 is an updated and mandatory circular amending and expanding the previous circular and prohibits the sales of high energy and low nutrition value drinks and soft drinks as well as chips and snacks in canteens and cafeterias and indicates that these provisions are to be included into the contracts of canteen operators. The circular also indicates that advertisements promoting the consumption of unhealthy foods and drinks are not permitted in school canteens. The most recent updated circular of 2016<sup>22</sup> provides a comprehensive list of food and drinks that can and cannot be sold in school canteens (see Box 1). The circular also includes standards (threshold values) on a number of foods and drinks for energy, fat, sodium and sugar content (Box 1). These standards are set based on international and national standards and scientific developments. The standard lists are developed by the MoH's Scientific Commission<sup>23</sup> for Health in Schools.

Since the school canteen circular is a multi-stakeholder effort, its implementation is affected by the level of engagement and positions of these stakeholders. On the public-sector side, the MoA did not have an official role for the circular implementation as this is not its duty by law. As Mr. Ayaz, the interviewee from the MoA states, this Ministry is primarily responsible for food safety. The representatives of MoA participated in meetings concerning the circular design and implementation and were involved in the process from the beginning, however; their engagement was not continuous as there were no regularly scheduled meetings and the MoA was mostly invited to such meetings with short-notice. The MoA could not be present with the same representatives in the meetings either and the official interviewed<sup>24</sup> indicated that this also contributed to the limited involvement of the ministry, without a continuous focus on the process and the developments.

From the MoH's perspective,<sup>25</sup> the neutral position and limited engagement of the MoA made the dialogue with the food and beverage sector difficult at times. The legislation for the establishment of the MoA sets forth its main responsibilities as the control, supervision, and management of food hygiene and safety as well as the regulation of food sales. Therefore, from a theoretical perspective, MoA was not a formal stakeholder but potentially an important one from an ethical perspective. MoA therefore acted with limited initiative by taking its official roles as a reference. One of the chips and snacks manufacturers went to the court in 2012 (when the chips sales were prohibited) claiming that this creates unfair competition. In May 2012, Frito Lay<sup>26</sup> contacted MoH (through MoNE) and asked that the sales of corn snacks in school canteens should not be banned as corn snacks are not chips. MoH rejected this request based on the evaluation of its Scientific Commission for School Health and based on the MoH's circular 2011 with the main argument that in the circular, the term *chips* is used as a plural term so as to include *chips and other snacks similar to chips*. With MoH's rejection, Frito Lay decided to sue the MoH (specifically Turkish Public Health Institution) in March 2013.

In response to Frito Lay's opposition during the judicial process, MoH used the following arguments: First, MoH made reference to the HNAL circular which necessitates that HNAL is implemented with the support from all involved institutions including the private sector (which implies that the private sector needs to be collaborative, rather than to resist compliance with the new criteria). Second, MoH made reference to the Turkish Standards Institution's definition of *snacks* in order to clarify the scope for the term. There, it's been emphasized that in addition to fried chips and snacks, baked snacks are also within the scope of the term snack. Third, MoH highlighted that the baked snacks contain a remarkable energy share from fat and also have high salt content, both of which show non-compliance with the circular criteria. While the judicial process was ongoing, MoH also continued to update of the foods and drinks list and standards to be applied in school canteens (a regular process of MoH, **independent** from the judicial process), by taking into consideration WHO's suggestions and other best practices in the world.

22 The most comprehensive list as a result of the MoH's continuous work has been finalized and presented to MoNE in June 2015, prior to its official update in 2016.

23 MoH forms Scientific Commissions for different areas of interest.

24 Author interview with Selman Ayaz, 31.05.2017.

25 Author interviews with Nazan Yardım and Sibel Gögen, 05.05.2017 and 07.07.2017.

26 Frito Lay Gıda San. ve Tic. A.Ş. is a subsidiary of PepsiCo.

**Box 1: Annex 2 of the Circular,<sup>a</sup> Decision of Scientific Commission on School Health****Food and beverages that cannot be sold in school canteens:**

- Energy drinks, soft drinks, aromatic drinks, sports drinks, and fruit syrups
- Chips and snacks
- All types of chocolate and wafer food
- Candy and confectionery
- Cakes with cream and jelly
- Sweet pastry
- Food and drinks with sweetener
- Coconut milk and cream
- Tea and coffee (exception: high schools)

**Food and beverages that can be sold in school canteens:**

- Fruits and raw consumed vegetables, salads (olive oil and lemon juice can be added)
- Dried fruits (30g, packaged, without sugar addition – fig, apricot, dried raisin, etc.)
- Nuts (30g, packaged, without sauce, unsalted – walnut, hazelnut, etc)
- Drinking water (without sugar or sweetener)
- Milk (UHT, pasteurized)
- Freshly squeezed fruit and vegetable juice (without sugar, less than 250 mL)
- Yogurt (packaged, 100–150g)
- Salted yogurt drink (packaged, 200g)
- Cheese (pasteurized)
- Daily boiled egg
- Sandwiches made with whole wheat bread, without adding butter (can include ingredients such as egg, cheese, fresh tomato, carrot, lettuce, fresh pepper, and vegetables)
- Natural mineral water
- Unsweetened chewing gum

**Packaged products (cakes, biscuits, crackers, aromatic yogurts, etc.) and drinks (aromatic milks and fruit juice, etc.) that can be sold in canteens with the condition that they comply with the following criteria:**

- Total energy content should be less than 200kcal
- Total fat energy content should be less than 35 percent of total energy content
- Total saturated fat energy content should be less than 10 percent of total energy content
- Total sugar energy content should be less than 35 percent of total energy content
- Sodium content should be less than 200mg
- Total energy content should be less than 150kcal and saturated fat should be less than 3g for ice cream and ice milk
- Iced food should contain more than 99 percent fruit juice, should not include sugar and it should be packaged as less than 200mL
- Aromatic milk should have less than 5g/100mL added sugar and less than 9.5g/100mL total sugar
- Aromatic yogurt should have less than 12.5g/100mL total sugar
- Fruit and vegetable juice should be 100 percent natural, should not have any added sugar and should be packaged as less than 250mL
- Tea and coffee cups in high schools should be less 375mL

**Snacks that can be sold by complying the following criteria:**

- Pastry (max 75g), toast with cheese (30 g white cheese or 15g cheddar cheese), bagel (max 90g), all have to have energy content less than 250kcal, saturated fat less than 5g and sodium content less than 400mg
- Simple cake (max 60g per slice), has to have energy content less than 240kcal, saturated fat less than 3g

**Hot served and processed food that can be sold in canteens meeting the following criteria (for 100g)**

- Burgers, meatballs, and nuggets: energy content should be less than 250kcal, saturated fat less than 5g and sodium content less than 450mg
- Processed meats: energy content should be less than 250kcal, saturated fat less than 3g and sodium content less than 750mg
- Pizzas, noodles, sandwiches, rice, and salted pastry products: energy content less than 250kcal, saturated fat less than 5g and sodium content less than 400mg

<sup>a</sup> Circular on the Hygienic Control of School Canteens and of Food and Drink Sales in School Canteens (mentioned as The Circular for Food and Drink Sales in School Canteens in the report), date: 10.03.2016, document no: 90757378-10.06-E.2852893.

This work, which was in constant progress was also submitted to the court in April 2013.

Having heard MoH's defense arguments, the court decided to reject the case in February 2014. The Council of State later rejected the appeal in May 2015. In December 2015, the judicial process ended when the Council of State ruled to reject the request to change the decision.

While the opposition of firms from the food and drink sector has been addressed by the MoH, the interviewees from the MoH believe that the position of the public sector could be stronger if MoA had been involved more in the process and that MoA's more stringent engagement could imply a wider, stronger and more determined public-sector position (and ownership) vis-à-vis the food and drink sector's opposition to the circular development and implementation process. They also think that the initial limited involvement of food and beverage sector throughout the process may have been an indication that the sector did not really believe that this circular would come into full practice and would be binding.<sup>27</sup> The interviewees from the MoH indicate that MoH held a number of subsequent meetings<sup>28</sup> in order to discuss MoH work on the circular (such as advertisements in the canteens and other preparations for the implementation) and share expectations of the sector and the MoH. During those meetings, the food and drink sector did not indicate giving support to these efforts. The stronger public-sector engagement (MoA in particular) would have helped to facilitate the technical dialogue between the food and beverage sector and the MoH and to alter the food and drink industry's (mis) perception. This could have had two possible positive outcomes: (1) The industry's opposition and concerns could have been heard, discussed, and addressed at earlier stages; and (2) The industry overall<sup>29</sup> could have been proactive (or could have acted early) for the change and would not have caught unprepared for the circular's actual implementation.

MoH's process of developing a comprehensive list of foods and drinks to be prohibited for sale in canteens

started earlier than the industry's opposition, and was ongoing by the time the judicial process came into play. Therefore, MoH's work indirectly helped to address this issue: As the scope of the food and drinks list that cannot be sold in school canteens increased and became more comprehensive, the claim of the Frito Lay snack manufacturer became void. It is also worth noting that this list is a living document and will continue to evolve as the international and national research and scientific evidence on healthy nutrition advances.

Despite the limitations, the engagement of MoA in the circular process has increased over time, since the circular draws now more attention as an agenda item, as the interviewee from the MoA suggests. Additionally, MoH and food and beverage sector became more demanding of MoA's greater and more stringent involvement in the circular process, especially for the supervision of canteens. As Mr. Ayaz from the MoA indicates, MoA has a positive opinion about being involved in the new tripartite canteen control/supervision structure<sup>30</sup> that will be implemented in schools but emphasizes that the roles and responsibilities of involved stakeholders need to be clearly defined and that the MoA's responsibilities need to be legally defined.

Similar to MoA, the food and beverage sector's involvement in the circular process was limited at the beginning but improved over time. The interviewees from the food and beverage sector indicate that they want to share their views with policymakers in more stringent and more frequent technical dialogues and believe that an extensive exchange of views will help improve the feasibility of the circular implementation. The interviewees also indicate that The Scientific Commission of MoH is mostly composed of experts/academicians from the medical field and that it would be more effective if there were enhanced representation from other technical fields such as food engineering and food manufacturing to increase the probable alignment of the circular criteria (and related decisions) with production feasibility of food and beverage products and with consumer demands.<sup>31</sup> In that sense, the food and beverage sector representatives think that MoA

27 The initial circular was a recommended circular.

28 The meetings took place in October 2014 and in January 2015. Main stakeholders, including health sector representatives, WHO, MoH's Scientific Commission, MoA, and MoNE attended those meetings.

29 While the overall industry had weak interest and engagement with the process, some companies had real interest in the upcoming changes and proactively introduced changes in their production and reformulation stages. These firms will be positively affected throughout the circular implementation process since they have already identified their strategy and actions for the change.

30 For this new structure, there will be a commission for each province, which will be composed of representatives from the Provincial Directorates of MoNE, MoH, and MoA (official correspondence of MoNE dating 5 January 2017, no: 90757378-136-E.173847).

31 The interviewees from the MoH emphasize that there are food engineers and dietitians in the Commission and the MoA representatives are invited to the meetings. They indicate that the Commission is an entity and has a scientific advisory function where its findings are being shared with the stakeholders and their demands and expectations are assessed.

should play a more active role since it is more aware of the sector's technical capabilities and the extent to which these can be used to meet the circular's requirements. They highlight that more stringent involvement of the MoA would help the food and beverage sector have its voice heard on technical and strategic topics such as the degree of feasibility of circular requirements, sector capabilities and limitations in meeting the requirements, the need for research and development (R&D) and reformulation to meet the circular criteria, and the extent to which the government can support the food and beverage sector for such innovative activities.<sup>32</sup>

In 2011, the food and beverage sector decided to conduct a survey<sup>33</sup> to understand the obesity status in Turkey and food consumption patterns of the Turkish population. The findings of the survey suggest that there is low awareness about healthy nutritional habits among the adult population.<sup>34</sup> Practices such as counting calories for weight control and reading the nutritional value tables of products are little-known. The findings of the study also claimed that the frequency of consumption of high calorie foods was low and the obesity rate in the country was related to the amount of food consumed.

In light of these findings, and with the circular coming into full force as mandatory, the sector shared its views and concerns on the implementation of the circular with a correspondence to MoH in September 2015 (no: 2015–31, dated 22.09.2015). The correspondence highlights: (1) the importance of taking into consideration the views and suggestions of the food and beverage sector, the contextual factors, and the conditions in the country; (2) the fact that the circular is currently bypassed by students and canteen operators—and prohibited foods and drinks can be bought from other shops outside schools; (3) the need to establish a monitoring and impact assessment mechanism for the circular to see how effective its implementation is in the prevention of obesity in children; and (4) based on the finding from their 2011 survey that the amount of food consumed, rather than the consumption of prohibited foods, affects obesity—the need to educate parents on healthy nutrition in order for them to stimulate behavior change among children

and adolescents. As a response to the food and beverage sector's correspondence, MoH first made reference to higher policy documents such as the Government's 10<sup>th</sup> Development Plan for 2014–2018 and MoH's Strategic Plan for 2014–2017, which emphasize the need and the necessity to encourage all relevant stakeholders for the promotion of healthy lifestyles, healthy nutrition and physical activity. Second, MoH highlighted its own legal responsibility to protect the public health and under this scope, to protect children's health in schools, as schools are public places. Lastly, MoH consistently shared the information and the results about their activities with the sector representatives.

The strategies and actions of the food and beverage sector vis-à-vis the school canteen circular is mixed: Some firms decided not to sell their (prohibited) products to school canteens as school canteen sales constitute only a small share of their sales. Some others acted proactively and invested in research and development to address the requirements of the circular. However, as Ms. Menlik and Mr. Sakkaoglu, indicate, these firms were either not capable of creating a customer base for the newly reformulated products (consumers did not like the new taste) or they were not able to achieve feasible consistency, texture, and storage conditions for the new product. For example, a company's efforts to produce ice cream that met the required criteria failed because it was not technically possible to get the texture that would keep the ice cream on a stick and be easy to package). Consequently, the interviewees stated that these firms experienced financial losses.<sup>35</sup> Interviewees from the food and beverage sector finally indicate that currently there is low motivation in the food and beverage sector to align with and pursue the goals of the circular.<sup>36</sup>

Unlike the food and beverage sector and the MoA, the Federation of Canteen Operators and Artisan Associations was highly interested in the circular and eager to be engaged in the process from the very beginning. After the circular numbered as 2007–33<sup>37</sup> had been published, the Board of Directors of the Federation of Canteen Operators and Artisan Associations decided to promote the selling of healthy drinks such as salty

32 Author interview with Ilknur Menlik and Burhan Sakkaoglu, 30.05.2017.

33 The study was conducted in collaboration with the Turkey Obesity Research Foundation and Bahcesehir University.

34 <http://www.egitimajansi.com/haber/beslenme-aliskanliklarimiz-aciklandi-ekmek-tahtini-birakmiyor-haber-9243h.html> and <http://hthayat.haberturk.com/saglik/haber/1003984-geleneksel-besleniyor-en-cok-ekmek-yiyoruz>.

35 Author interview with Ilknur Menlik and Burhan Sakkaoglu, 30.05.2017.

36 The interviewees from the MoH think that another reason for the sector's low motivation might be the fact that school canteens sell products that do not comply with the Circular along with products that do comply.

37 This was an advisory/recommended circular.

yogurt beverage and milk rather than soft drinks in school canteens in Istanbul. To this end, the implementation prohibited the sale of soft drinks to students only during the first three recreation breaks of a school day. Based on data from drink producers and school canteens, the Federation later determined that this initiative increased the consumption of salty yogurt beverages even though soft drinks were not banned in canteens.<sup>38</sup>

There was no regular and formal feedback available to the Federation for its involvement in the circular process and the Federation stated its concerns by bringing up the 13<sup>th</sup> clause of the law 5362 (TESK 2005) Law on Tradesmen and Artisans Professional Organizations, which states that it is compulsory to consult and get the feedback of the relevant chambers when decisions made by official authorities impact the professional activities of tradesmen and craftsmen.<sup>39</sup> Despite explicitly stating its concerns about being involved, the Federation did not get the feedback it was expecting,<sup>40</sup> and decided to be proactive again. Representatives from the Federation began meeting face-to-face with MoH and MoNE counterparts. Ms. Sapankaya, the interviewee<sup>41</sup> from the Federation of Canteen Operators believes that through these frequent visits both parties gained an understanding of each other's concerns and needs. MoH started to get feedback from the Federation on implementation issues. For the past two years, MoH has been actively participating in training activities organized for canteen operators and gives trainings on healthy nutrition.

Ms. Sapankaya stated that the circular implementation adversely affected canteen operators. Many of the canteen operators at the primary schools left the business due to the difficulty of competing with shops outside schools, which are not subject to the same rules. In addition, there is high turnover for operating canteens, which has a negative implication as the Federation and schools lose canteen operators trained on healthy nutrition and healthy food sales and have to re-establish this capacity each time there are new canteen operators.<sup>42</sup>

The Federation of Canteen Operators of the provinces İzmir, İstanbul, and Konya, the federation of Turkish Food and Drink Industry Associations and one school canteen operator (Ms. Nursel Koga) went to Council of State in May 2016 to sue MoNE, claiming that the circular creates conditions for unfair competition for its members. During the judicial process, the main argument of the Federation was that there is a gap between what is currently produced and under development and what is required by the circular, thus leaving canteen operators with little or no choice in finding appropriate products to sell. The interim decision of the Council of State, announced in May 2017, asks for the composition details of the MoH's Scientific Commission (members of the Commission, expertise area of Commission members) and for the evidence that the prohibited foods are harmful for health. Ms. Sapankaya thinks that the progress in the judicial process so far is positive and that the MoH might consider revising the circular if the judicial system sides in favor of the Federation. Regardless of the final decision of the Council of the State, the Federation intends to continue to improve its dialogue with MoH in order to inform them about the status and limitations in the field.

Interviewees from the MOH believe it is important to highlight the misperception of the Federation and the canteen operators that canteens need to have the same operating conditions with shops outside school settings. They stipulate that school canteens should be different from outside shops in terms of health and hygiene conditions, and that canteen operators should know that they can only operate under these conditions. MoH interviewees also indicate that prohibiting foods that do not comply with the circular outside school settings would only be possible with a change in the Law, and that this is currently unlikely.

Varying degrees of stakeholder involvement throughout the process of circular conception, development and implementation, gaps in the multi-stakeholder dialogue, gaps in the demand and supply side of food and beverage products complying with the circular, and the general public's perception on healthy nutrition currently constitute the primary challenges for the effective implementation of the circular.

**First, the level of public awareness on healthy nutrition is one of the critical success factors for the circular implementation.** The 2016 circular<sup>43</sup> is rather

38 Author interview with Zülfiye Sapankaya, 05.06.2017.

39 Correspondence no A.K.O. -2015-79 dated 28.08.2015. The correspondence was made by the Federation of Canteen Operators of Ankara.

40 In response to the Federation of Canteen Operators, MoH indicated that it is in agreement with the Federation's suggestions on taking measures to prevent children going outside the schools to buy foods and to arrange and monitor the external school environment. Additionally, MoH highlighted that the collaboration with the Federation of Canteen Operators of Ankara would make important contributions to their efforts.

41 Author interview with Zülfiye Sapankaya, 05.06.2017.

42 Author interview with Zülfiye Sapankaya, 05.06.2017.

43 The 2016 circular has an extended and comprehensive list of foods and drinks that can and cannot be sold in canteens.

new and is not fully implemented. All stakeholders agree that the implementation is adversely affected by low awareness about healthy nutrition among families, children, and teachers. Low awareness is one of main drivers of unhealthy food consumption patterns; to ensure that the children are not hungry at school, parents provide children with more than enough (and mostly affordable but unhealthy) food for school. Unhealthy nutrition habits of parents are also transferred to children, and outside of home/family settings children seek the foods and tastes acquired from their parents. Interviewees from both the food and beverage sector and the Federation of Canteen Operators indicate that the share of school canteen food consumption is low within a student's total nutrition and much of the energy need of children is being met from food eaten outside the school context. They also emphasize that what is important is the amount consumed for any product, rather than the product itself. Interviewees from the MoH, on the other hand, emphasize that nutritional practices in schools are as important as the practices outside the schools since school practices help children to acquire nutritional behaviors. In order to address the issue of low awareness, MoA suggests that their large-scale training programs can be leveraged to provide healthy nutrition awareness to the population. To illustrate this point, there are two recent regulations on which the MoA will conduct extensive training for food and beverage manufacturers: regulation on labeling and informing consumers (Resmi Gazete, Sayı 29960, 2017) as well as regulation on nutrition and health reporting (Resmi Gazete, Sayı 29960, 2017). The scope of these training activities on these two regulations can be increased to include healthy nutrition education and awareness for the population.

**Secondly, as interviewees from MoH, the food and beverage sector, and The Federation of Canteen Operators also agree, the circular creates a feasibility gap on both the supply and demand side. On the supply side,** the food and beverage sector believes that the circular criteria currently exclude most packaged foods since current production capabilities of the sector are limited (or do not exist) in terms of producing products that meet the criteria, despite some voluntary attempts of individual companies to comply with the circular requirements. Production limitations as well as the difficulty in satisfying customer taste with new products constitute the main disincentives for the sector to pursue changes to meet the circular

criteria. All stakeholders agree that the availability of the products that will comply with the circular is an important factor for the sustainability of the school canteen circular program.

The supply side feasibility gap therefore calls for a more stringent and technically enhanced dialogue of the MoH, MoA, the food and beverage sector, and canteen operators. The interviewee from the MoA suggests that relevant departments of universities also need to be consulted because they can provide advice in technical areas. The interviewee from the Federation of Canteen Operators, on the other hand, believes that the opinions of the Federation would be important for the effective implementation, because the Federation best knows the field and therefore the implementation problems in the field.<sup>44</sup> The dialogue should involve consensus among stakeholders with an effort to find an *operationally feasible common ground* upon which to proceed.

**From the demand side,** as the interviewee from the Federation of Canteen operators indicate, the socio-economic status of most families and students adversely affects their interest to buy some of the products<sup>45</sup> recommended by the circular, since at this time the purchasing power of families and students is low vis-à-vis such products. To illustrate this point, the interviewee from the Federation of Canteen operators indicates that the Federation supports the ban of soft drinks, chips, and confectionary sales in canteens, but she also adds that the criteria set forth for some other foods are difficult and costly to achieve by the producers. Therefore, the price of recommended products is ultimately high, and the goods will spoil if they are not sold, thereby causing canteen operators to incur losses.

**A third issue highlighted by all stakeholders is that both families/children and canteens or shops/markets have their own ways to bypass the circular restrictions. On the consumer side,** as interviewees from the food and beverage sector and the Federation of Canteen Operators indicate, prohibition mainly triggers curiosity among children to consume these foods and they access the prohibited products from shops and markets outside schools (schools do not effectively control students going outside during school hours/recreational breaks). There can be other effective measures to be taken

<sup>44</sup> Author interview with Zülfiye Sapankaya, 05.06.2017.

<sup>45</sup> Whole wheat bread and walnuts were given as examples of such products. Author interview with Zülfiye Sapankaya, 05.06.2017.

by the school administration in not allowing children to go out and not to use other shops and markets for these food sales. To this end, a new mechanism to supervise and audit the circular's implementation in schools is planned for implementation during in the 2017–2018 school year, led by the MoNE, MoH, and MoA.<sup>46</sup> MoNE will be the coordinator and all three ministries will give necessary directions to and monitor their provincial branches for the implementation progress.

As all stakeholders agree, the ban is also disregarded during the frequently organized school birthday parties and other similar events where the food consumed is provided by the parents and this food is not inspected. Because of the low awareness of parents, the food is mostly comprised of unhealthy items. **On the operational side**, the interviewee from the Federation of Canteen Operators emphasized that when canteen operators cannot find *circular-friendly* food to sell or when such food is available, they are too expensive for students, the canteen operators will provide the desired food from either unregistered small producers (thus encouraging the informal sector) or procure the products from big markets and still sell them in the canteens. Interviewees from the MoH do not agree with the comment that canteen operators are not able to find circular-friendly foods to sell. **On the producer side**, some food manufacturers try to bypass the circular restrictions by changing the commercial name of the product which is prohibited by the circular, as one interviewee from the food and beverage sector highlights. The interviewees from the food and beverage sector claim that these practices create unfair competition therefore they mainly oppose them.

**Another challenge highlighted by the food and beverage sector and by the Federation of Canteen Operators is the perception the circular creates for the general public.** The interviewees from the food and beverage sector and the Federation of Canteen Operators believe that there are some misperceptions created by the circular: First, the sector interviewees believe that there can be a misperception that unpackaged products are healthier than packaged products. However, it is difficult to monitor the sugar/fat/energy content of these unpackaged products. Secondly, as the interviewee from the Federation of Canteen Operators states, the circular creates a perception that school canteens are the sole

reason of obesity among children since sales of some food and drinks are only prohibited in school canteens.<sup>47</sup> She highlights that this is not the case as (1) children have only one meal at school; (2) according to Federation's findings, only 20 percent of the students buy food and drinks from school canteens; and (3) recreational breaks only last 5 minutes and it is not possible for children to become obese only by consuming food bought from canteens in such a short time.

**Lastly, there is concern about the penalties associated with the implementation of the circular. While MoNE officials indicate that non-compliant school canteen operators can be subject to penalties according to the article 22<sup>nd</sup> of the regulation for Parent School Associations, the interviewee from the MoA highlights that there are difficulties in understanding who is responsible for officially imposing the penalties on non-compliant canteen operators.** While there are expectations from the stakeholders that the MoA will apply these penalties, he states that this is not a task legally assigned to the MoA. Another concern relates to the expertise required for the supervision. The interviewees from the food and beverage sector, MoA, and the Federation of Canteen Operators have all claimed that the canteen supervision process is highly technical and requires expert knowledge, and questioned whether PSAs are technically capable of carrying out such highly detailed supervision. In that sense, the interviewees from the Federation of Canteen Operators and the MoA believe that MoA has the required infrastructure and human resource capacity to carry out such specialized supervision and control of canteens and can therefore have a critical role. For this to happen, Mr. Ayaz from the MoA felt that MoA's roles for canteen food supervision for the circular should be made clear by the law.<sup>48</sup> He also highlights, however, a caveat concerning the operational workload that would be created by the circular inspection process. Considering that MoA already has a significant workload of inspecting each school at least twice yearly for food security, one of its core functions, he believes that the continuous inspection of around 25000 schools throughout Turkey for the school canteen circular would be difficult. On the

<sup>47</sup> As a counter-argument to the Federation, interviewees from the MoH indicate that School Canteens are not the only area MoH is focused on in addressing the obesity challenge. MoH plans many interventions in other areas.

<sup>48</sup> Author interview with Selman Ayaz, 31.05.2017.

<sup>46</sup> MoNE's official correspondence (date: 11 January 2017 and number: 173847).

other hand, the interviewees from the MoH indicate that including representatives from MoH and MoNE might mitigate the additional workload.

### Physical Fitness Scorecard for Health in Schools

Around the same time when the updated and extended School Canteen Circular was implemented another program, independent from the School Canteen Circular, was initiated. This program, the Physical Fitness Scorecard for Health Program, aims to take stock of and assess the physical activity status of secondary and high school students (adolescents) and to improve their physical activity levels. Physical inactivity is a growing problem not only for children but also for adolescents in Turkey. The Turkey Health Nutrition Survey of 2010 suggests that a remarkable share of the young population, especially female adolescents, are physically inactive. The survey data showed that the share of 12–14-year-old and 15–18-year-old male adolescents who reported to have no physical activity for the previous seven days was 41.4 percent and 44.6 percent, respectively. The figures are even worse for female adolescents: The share of 12–14-year-old and 15–18-year-old female adolescents who reported no physical activity for the previous seven days was 69.8 percent and 72.5 percent, respectively (TBSA 2010).

The program started in Ankara in 2013 by the MoH as a result of the evaluation of the report on the work done in 2011–2012 and through MoNE’S decision, became a nationwide initiative in 2016. It includes a number

anthropometric and physical activity measurements<sup>49</sup> to be done by physical education teachers in all secondary and high schools.<sup>50</sup> The measurements are to be done twice a year (at the beginning and end of the school term) and the measurement results are to be shared regularly with the parents and the students to inform them through the MoNE database.<sup>51</sup> The program is administered during normal physical education courses in schools but it is different and distinct from the curriculum and does not affect academic grades for this course. Anthropometric measurements include weight and height, along with physical exercise measurements that include performance for push-ups, crunches, and a sit and reach flexibility test. While a 20-meter shuttle run test had also been suggested initially by the MoH, it was excluded from the measurement scope as cardiologists had concerns about the possibility of sudden deaths during this exercise.

The anthropometric measurements are important in that they provide an assessment of health-related physical fitness level of each student, instead of tracking performance on sport-related skills. These measurements can be used to develop personalized physical activity schemes that could help each student in areas where she/he specifically needs improvement. The Scorecard

49 The program uses the FITNESSGRAM test, which is an internationally used scheme and that involves a series of health-related fitness activities that assess students’ physical fitness levels. Students’ performance is assessed against the health fitness standards set for each age and gender that indicate good health. ([http://www1.pgcp.org/uploadedFiles/Schools\\_and\\_Centers/High\\_Schools/Bladensburg/Academics/fitnessgramflyer.pdf](http://www1.pgcp.org/uploadedFiles/Schools_and_Centers/High_Schools/Bladensburg/Academics/fitnessgramflyer.pdf)) The measurements of FITNESSGRAM tests usually start at the age of 10, which broadly corresponds to secondary school level and higher.

### Stakeholder Roles

MoH	MoNE	MoA	School Canteen Operators	Food and Beverage Sector
Leadership, advisory, and advocacy role with the power to set legal and operational framework (setting food and drink standards to guide food sales in schools)	Regular control and supervision of healthy and safe food and drink sales Implementer of the circular in schools through School Commission for Canteen Sales Control (the commission is composed of school manager, teachers, PSA representative, and school board representative, and controls monthly canteens and cafeterias)	Occasional advisory role to PSAs on food health and safety, if requested by PSAs. Audit and control of food hygiene and safety Training and certification of canteen operators	Provide food and drink sales according to the directions/rules set forth by the circular Comply with the hygiene and food safety rules	Advisory and advocacy for the development of circular (in terms of reformulation, feasibility, and food safety)
Organization of training and symposiums Development of training materials	Authority to apply sanctions in case of non-compliance with the circular			

**Perceptions of Stakeholder Positions for the Circular**

↓ what a stakeholder thinks about other stakeholders' position on the circular

	MoH	MoNE	MoA	School Canteen Operators	Food and Beverage Sector
MoH		Positive	Neutral/positive	Negative	Negative
MoA	Positive	Neutral/positive		Negative	Negative
School Canteen Operators	Positive	Neutral / not much engaged	Positive / can involve more		Negative
Food and Beverage Sector	Positive	Not much engaged / neutral	Neutral / can involve more	Negative	

Source: Elaboration by author.

Note: The table is to be read row-wise as follows: each row indicates the view of the stakeholder (mentioned on the leftmost side) on other stakeholders' position for the circular whose names are indicated at the top of each column

program aims to address the need to increase physical activity levels of adolescents through individualized exercise schemes instead of a one-size-fits-all approach.

**From A Core Team Effort to Nationwide Implementation**

The idea of recording physical fitness measurements was first conceived in 2009–2010 by a core team,<sup>52</sup> with the idea of analyzing how and to what extent the physical activity course curriculum was implemented in the schools and determining its impacts. The team's examination of international practices revealed that the physical fitness tests<sup>53</sup> that were already in the curriculum were in line with the international trends, however, there was low awareness among the physical education teachers and the MoNE inspectors towards these tests and it was not well-known to what extent these tests were being implemented.

In 2010–2011, as a team effort, a pilot was conducted in a secondary school in Ankara<sup>54</sup> where the team assessed the individual physical fitness of around 750 students. These measurements were shared with both the students and their families, together with a letter to parents. The team then drafted a personalized exercise program for

each student. The implementation of these personalized exercise programs created a motivation among students to exercise and the second round of measurements after the personal exercise programs revealed that around half of the students had improvements in their physical fitness test values. Encouraged by the positive results, the physical education teacher of the small team informed families during regular parent meetings in detail about the importance of physical exercise on healthy living. During an interview, Mr. Gokten recalled the pitch that he used to stimulate discussion with parents: *'Do you want your children to be rich or to be healthy? You think a lot about sending your children to private courses so that they are successful in the university entrance exam, they are accepted to highly-reputed universities, they get good jobs and they have a decent income. But do you also think about your children's health as much as you do for his/her future career?'*<sup>55</sup> These informative sessions were helpful as parents responded positively and they themselves even showed interest for such activities. *'Please take our measurements as you take measurements of our children, demanded some parents,'* Mr. Gokten indicated.

The initial results of the pilot were presented in a symposium<sup>56</sup> organized by METU in January 2011 where both MoNE and MoH (through their Provincial Directorates in Ankara) showed interest in the implementation and the results. The Physical Activity Department of MoH later took ownership and followed up on the process. The pilot implementation of the scorecard program started in 2012 in 25 districts and in

50 Currently, secondary school covers grades 5<sup>th</sup> to 8<sup>th</sup> and high school covers grades 9<sup>th</sup> to 12<sup>th</sup>.

51 The MoNE database has a feature that allows both students and their parents access and view information about the student, such as grades, attendance, exam schedule and course schedule. The individual measurements of the scorecard program are intended to be shared through this interface.

52 A PhD student from Middle East Technical University (METU) and a physical education teacher, Hasan Gokten. Hasan Gokten has been interviewed within the scope of this case study.

53 These measurements include tests for muscular strength, muscular endurance, flexibility, BMI, and CVD respiratory fitness.

54 Ufuktepe İlkogretim Okulu in Kecioren district was the pilot school.

55 Author interview with Hasan Gokten, 29.05.2017.

56 The symposium was called 'New and Innovative Approaches in Physical Education' and is held on 21–22 January 2011.

34 schools<sup>57</sup> of Ankara (Annex 4). There was an initial resistance from physical education teachers of the involved schools on implementing the program and on taking measurements (with the argument that it will increase their workload). As an answer to this resistance, the physical education teachers were reminded that this implementation has a legal basis and compulsory (there is a decision by the MoNE Provincial Directorate) and failure to comply would result in a penalty.<sup>58</sup>

In 2013, analysis<sup>59</sup> of the data collected from Ankara pilot implementation revealed demographics from each district, such as which district had the greatest number of students who were overweight and obese, the students with highest muscular strength, endurance, flexibility, etc. These results were presented to MoNE Ankara Provincial Directorate after which the Ministry decided to scale up the program to all schools in Ankara that same year. While the implementation was taking place in Ankara, MoNE and MoH decided to roll out the scorecard program nationwide.

The period of 2013–2015 was the planning period for the nationwide implementation. The scorecard that is shared with parents aims to raise awareness for physical activity and to get feedback from families. Sharing the results of the measurements with families is important as the measurement data does not only reveal how physically fit a student is, but also highlights any potential health problems<sup>60</sup> and provides a basis for customized exercises to address such problems.

In 2016, training videos and other training materials for physical education teachers on how to take measurements were prepared and published. As the scorecard program was scaled up to become a nationwide initiative, it was important to ensure consistency of procedure/implementation in schools for reliable data and results. To standardize the measurement process to the extent possible, physical education teachers have been trained by MoH and MoNE using training material the MoH and MoNE developed. The train-the-trainer approach was utilized as there was a large number of teachers that needed to be trained.<sup>61</sup> There was a one-day promotion

and training activity in 12 regions of Turkey, during which approximately 8000 teachers were trained; those trained teachers were supposed to train all other teachers in the last half of 2016. A protocol between MoH and MoNE was signed in May 2016 (MoNE Collaboration Protocol 2016). Based on this protocol, MoNE opened its database for the program and added a new area in the MoNE e-school system so that the teachers can enter the physical fitness data.

The nationwide implementation of the program was started recently and the first round of nationwide data entry was done in April–May 2017. As it stands, **nationwide regular and standard data collection as well as the consistency of measurements seem to constitute the main implementation issues to focus on for the success of the Physical Fitness Scorecard for Health program.**

The teachers are supposed to enter the measurement data in the MoNE database, however **there are challenges in terms of regular and full scope data collection as teachers see it as an additional workload.** The officials from the MoNE indicate that these challenges are being addressed through close communication with the local branches and through awareness training activities conducted. As indicated by Mr. Gokten, pilot implementation<sup>62</sup> in Ankara revealed some implementation difficulties including taking measurements, false data entry in the system, and the entry in the scorecard program database of student records on height-weight that previously existed in the e-school servers. Therefore, there can be errors and gaps in the data collection. This will affect the data quality/reliability and the robustness of data analysis and interpretation at later stages of the program.

Additionally, there are infrastructure (equipment and measurement settings) gaps in schools for the program to be effectively implemented.<sup>63</sup> **Pilot studies revealed that the schools may lack necessary tools and means for measurements (weighing scales, height measurement tools, and floor mats). Currently there is no centralized procurement for the program equipment and each school administration is supposed to**

57 This initial implementation comprised more than 18.000 students.

58 Author interview, Hasan Gokten, 29.05.2017.

59 The data has been analyzed by Istanbul technical University.

60 Some of the measurements predict such problems.

61 MoH's official correspondence (date: 15 January 2016, number: 23248055-32E2455) and <http://fizikselaktivite.gov.tr/tr/beden-egitimi-ve-spor-ogretmenlerine-yonelik-fiziksel-aktivite-karne-egitimi-yayinlandi/>.

62 The results of this pilot implementation were later evaluated by the MoH.

63 Weigh scales and height measurement tools are not in the official list of tools and equipment that every school should have, as set forth by the legislation. Therefore, this equipment needs to be procured for the scorecard program. In addition to procurement, training and introductory materials prepared for the program implementation need to give guidance on how to address the equipment gap.

**provide its own equipment.** One concern is related to the extent to which schools will have ownership of the program and will invest in the program equipment. **Another concern is that individual equipment provision may result in non-standardized measurements across schools.**

## Lessons Learned

Two school-based interventions elaborated in this case study reveal a number of overarching lessons that can provide insight to countries that intend to develop and implement policies to prevent and control obesity. These general lessons are particularly crucial as they relate to and highly affect the large-scale nature of both interventions.

A first lesson is that enhanced and continuous communication is critical for success. Internally, from the stakeholders’ and implementers’ points of view, this means effective, uninterrupted, and in-depth dialogue. Externally, from the population’s point of view, this calls for intensive efforts to create awareness and thus to lead to behavior change over time. Both of these internal and external efforts will bring about proper engagement and genuine buy-in of the involved parties and will eventually lead to feasible and successful practices in the field.

Another lesson learned is that the programs need to be **customized**. Therefore, policy design and implementation should take into consideration the country context (based on scientific evidence) in order to have a **viable** conceptual and operational framework. Here, more stringent and

effective dialogue and communications with stakeholders and with the target population highly influences the degree to which the environmental context is understood and duly reflected in policies.

A third lesson concerns making the best use of existing capacity and to be fully aware of the system capabilities and limitations in terms of organization, infrastructure, and subject-matter expertise. Large-scale implementations, such as the nationwide scale-up examples explored in this case study, necessitate proper assessment of existing capabilities and gaps for successful program design and implementation.

In addition to these general lessons, each program has its own specific lessons that can provide further guidance to the reader, as detailed below.

## The Circular for Food and Drink Sales in School Canteens

As the interviews with the stakeholders reveal, the viable implementation of the circular requires that all involved parties adapt themselves. From the policy makers’ perspective, the successful update and implementation of the circular depends to a large degree on giving due consideration to enhanced dialogue and consensus with the stakeholders. From a sectoral point of view, improved dialogue would help the food and beverage sector make necessary technological transformations to keep up with the circular requirements. From the external environmental perspective, improving awareness and driving behavioral change among the greater population seems crucial for the sustainable

### Stakeholder Roles

MoH	MoNE
Advisory role with the power of setting operational framework	Data collection/measurement of physical activity performance (by teachers)
Data analysis and reporting	Entry of program data into e-school module developed for the program
Training of teachers for the program: measurement taking and data entry to the system	Identification and appointment of teachers for the program training
Development of training materials	

### Perceptions of Stakeholder Positions for the Scorecard Program

↓ What the stakeholder thinks on the other stakeholder position for the program	MoH	MoNE
MoH		Positive
MoNE	Positive	

implementation of the circular. Lastly, from an operational point of view, the proper use of subject-matter expertise already available among stakeholders seems necessary for effective implementation, especially in terms of supervision.

**More stringent and in-depth technical dialogue with stakeholders to reach consensus is important for the circular to have feasibility in actual implementation.** From the time of the introduction of the circular, the dialogue and interaction among stakeholders was sometimes slow, fragmented, and limited. This not only affected the circular implementation in the field but also delayed/hindered the emergence of solutions that would otherwise accelerate the adaptation of involved stakeholders to the new environment and operational framework created by the circular. Therefore, it is important that stakeholders from the food and beverage sector, as well as canteen operators, be encouraged to maintain continuous and stringent engagement with the MoH and MoNE. A stringent technical dialogue between the policy makers, the food and beverage sector, and school canteen operators is critical to find common ground and to develop solutions that are feasible. This way, the MoH would then be able to update the circular requirements while taking into consideration food and beverage sector current and future capabilities and limitations. The food and beverage sector would modify and transform its production capabilities according to the agreed-upon circular requirements. A technically-enhanced and more stringent dialogue would reveal the research and development needs for reformulation and new investment as well as the limitations of the sector (that is, what requirements are technically feasible and what others are not) in complying with the circular. Canteen operators would give feedback on the extent to which the food and drinks are in compliance with the circular and on the effectiveness of the process. As a suggestion from the food and beverage sector, technical advocacy that can be provided by the sector—specifically on food engineering—can be helpful in updating the circular criteria. Such type of technical support needs even be strengthened with the support from the academia. The dialogue enhancement efforts also call for more stringent and increased involvement of MoA. The experience and highly technical capacity of MoA makes it a potentially effective convener to facilitate the dialogue between the food and beverage sector, canteen operators, and the policy makers. On the other hand, interviewees from

the MoH suggest that it would be highly beneficial if the sector supports the firms in the area of innovation on food engineering.

**For the circular to have increased impact, there need to be organized efforts to drive population behavior change.** Considering that awareness and public perception of healthy lifestyles is low, raising awareness at the population level is an important tool for driving behavioral change on healthy nutrition and active lifestyles. Targeting parents for awareness and behavioral change is especially important since parents, as their closest role models, have a high degree of influence over their children's behavior. Behavioral change is also an important contextual factor that would have a direct impact on implementation success. The absence of such change will have offsetting effects: The food and drink limitations in the particular context of the school canteen circular will have less than optimal effects as parents and children with low awareness will use means to bypass these limitations.

**Making the best use of existing technical capacity and experience of public institutions is crucial in a large-scale nationwide implementation.** Officially involving subject matter experts from MoA in the school canteen supervision process would contribute to the effective implementation of the circular. Monitoring and supervision of canteen operations with respect to circular requirements is an important component of the program as subsequent decisions and penalties concerning canteen operations provide the main accountability pillar of the scheme. Supervision and control of foods and beverages sold in school canteens with respect to the circular requires expert knowledge and experience. This highly technical task necessitates extensive training and capacity-building for those who will be providing oversight. The technical and experienced human resource capacity already exists in the MoA and this needs to be leveraged to support the circular supervision process. This responsibility to MoA needs to be arranged through a legislative process which clearly defines MoA's and other stakeholders' roles. Considering that the monitoring of school canteens for the circular constitutes a large nationwide task in terms of the workload, making the best use of the existing technical capacity in MoA would also be the most effective use of available expertise and experience.

**Viable implementation of the circular depends largely on the alignment of the circular with the**

**broader environmental and country context.** A number of issues related with the broader country context, such as the high prices of some of the healthier foods as compared with the current purchasing power of the population, along with low education about and awareness of healthy nutrition among canteen operators, families, and children are factors that adversely affect the implementation of the circular. To this end, interviewees from the MoH highlight the need to take financial precautions and implement subsidies. The circular design and implementation should not be considered in isolation and means to address these environmental issues need be taken into consideration while updating/ extending the scope and the implementation modalities of the circular. Taking into consideration these contextual factors might introduce some limitations to the design ideals of the circular and to the implementation practices and the progress might only be incremental and gradual, but these solutions will *actually* work (be feasible) in the field and the improvements will be mostly robust and sustainable as the circular framework will be aligned with contextual factors, not against them.

**If properly communicated, robust evidence can initiate or accelerate collaboration with relevant stakeholders.** In the case of the school canteen circular, the evidence generated by COSI was crucial to drawing the attention of and to bringing about collaboration with MoNE. The fact that COSI is now a regular surveillance and monitoring mechanism is a clear indication that the evidence that will be generated by upcoming COSI studies will be actively sought after for future policy updates and design.

**Having clear definitions in the circular and in the regulations is important.** This will ensure that definitions are understood the same way by everyone, which will eventually prevent misunderstandings and oppositions to policy design and implementation. A general description of the *chips* in the original circular facilitated the judicial claim from Frito Lay, a claim that was later dropped when more detailed definitions of unhealthy foods were added to the circular. Clear definitions will therefore mitigate such misunderstandings and oppositions.

## Physical Fitness Scorecard for Health in Schools

Physical Fitness Scorecard for Health program is a good example on how different and innovative ideas

may be incorporated into policy making and may lead to positive results for a desired change. As the program is a rather recent nationwide scheme thus having a very large-scale characteristic, the initial issues concerning implementation is a reminder of how crucial it is for the implementers (in this case, the physical education teachers) of a program to feel ownership of the program. The degree of ownership affects the quality of the actual implementation process, specifically the steps of standard measurement taking, data entry, and reporting. Performance of these activities on a standard basis will also affect the subsequent stages of the process, namely the analysis, interpretation, and reporting of the large-scale data, since the results of this program will help shape future policies.

**Openness of policy makers to innovative ideas might bring about potentially effective policy mechanisms.** The scorecard program has shown that even a small innovative project can be an important driver to the design and implementation of programs that produce positive results. In this case, policy makers were attentive and interested enough to give due consideration to this innovative project, and agile enough to translate an experimental effort into an official implementation with a rapidly increasing scale. Here, it is also worth mentioning that the policy makers gave due consideration to the *evidence* as the findings and the immediate results of the initial individual project led public policymakers to scale up the program nationwide. A point to emphasize here is that future efforts of scaling up need to be supported with continuous monitoring and evaluation, which would not only provide insight on whether to continue with certain aspects of the program but would also give guidance on how to improve and modify the process.

**The program needs to ensure the use of standard tools and equipment for the measurements.** As a scheme rapidly being scaled-up nationwide, the Scorecard Program highlights the importance and necessity of having a standard infrastructure (in this case, the basic measurement equipment) and introducing standard measurement procedures to be pursued by the program implementers. In this case, in the absence of a central procurement mechanism for the program measurement equipment, there is a current need to ensure that tools and equipment to be used for measurements are standard throughout the implementing schools. Policy makers have already trained the physical education teachers so that the measurement process they will carry out is

standardized to the extent possible. These efforts need to be complemented by ensuring that the measurements are also made by standard equipment in order not to compromise data reliability.

**To complement the measurement process, efforts are also needed to ensure standardized data entry and reporting.** The database system (or relevant modules within the database) needs to ensure that faulty data entry is minimized to the extent possible. As the scorecard program is a nationwide effort and aspires to collect a large amount of data, accurate data entry in the system is important for the further analysis and processing of data. The program design therefore needs to incorporate such relevant features if the policy makers would like to make the maximum use of this large-scale data for decision-making. As indicated below, effective data entry is often positively affected by the increased commitment of the implementers, the physical education teachers.

**Motivation of physical education teachers for the program is a key driver for effective implementation.**

Getting genuine buy-in of the physical education teachers in schools is important. Scorecard program tasks assigned to teachers are currently seen as an additional workload, and a number of practices have been observed among these teachers to bypass and minimize the task of collecting and entering program data. Such avoidance will lead to *compromised data integrity*, which could eventually undermine the program's credibility and success. The initiator of the Scorecard Program, Mr. Gokten, felt that small in-kind incentives (such as a sportswear kit and sports bag for teachers) can increase the motivation and interest of the teachers in the scorecard program and can facilitate their greater engagement. This ownership is critical as it will positively affect the data collection and data entry and will help to alleviate issues discussed in the previous paragraph.

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## Annex 1: Timeline of Events

DATE	EVENT	REMARKS
<b>PREDECESSORS</b>		
1998-present	<p>Various obesity and NCD prevalence surveys</p> <ul style="list-style-type: none"> <li>• 1993–1998–2003–2008 and 2013 → Turkish Demographic Health Surveys highlight obesity among women of age 15–49 (1993: 32 percent overweight and 19 percent obese, 1998: 33 percent overweight and 19 percent obese, 2003: 34 percent overweight and 23 percent obese, 2008: 34 percent overweight and 24 percent obese, 2013: 28 percent overweight and 27 percent obese, also 11 percent of the children under five are obese).</li> <li>• 1999 → TOHTA, Turkey Obesity and Hypertension Survey, 35.4 percent obesity prevalence for women and the risk is 1.8 times higher for women than for men</li> <li>• 2002 and 2011 → TURDEP I and II Turkey Diabetes, Hypertension, Obesity and Endocrinology Disease Prevalence Study. TURDEP II highlights a 40 percent increase in obesity between 2002 and 2011 for adult population</li> <li>• 2004 → Turkey Burden of Disease Study reveals that avoidable disease burden created by insufficient physical activity (ischemic heart disease, ischemic stroke and diabetes) in terms of DALYs corresponds to 4.3 percent of the total disease burden. Disease burden attributable to high BMI constitutes 7.3 percent of the total DALYs</li> <li>• 2009 → TOCBI study (Turkey Surveillance on Growth Monitoring in School Aged Children in Turkey) obesity prevalence for children 6–10 age group (obesity prevalence 6.5 percent and overweight prevalence 14.3 percent)</li> <li>• 2013 → COSI-TUR (Childhood Obesity Surveillance Initiative) highlights an increase of 8.2 percent in the obesity prevalence between 2009 and 2013</li> <li>• 2010 → Turkey Healthy Nutrition Survey: obesity prevalence for 19+ population: males 20.5 percent and females 41 percent, overall population 30.3 percent. Obesity prevalence for children 0–5 age: 8.5 percent (males 10.1 percent and females 6.8 percent) 6–18 age group: 8.2 percent (males 9.1 percent and females 7.3 percent)</li> <li>• 2013 → Chronic Diseases and Risk Factor Survey in Turkey 2013, Results of the Regression analysis: Overweight and obesity is a country-wide problem but people with low educational attainment and housewives are the population segments which are more likely to be affected from obesity.</li> </ul>	Inflection points
November 2006	WHO European Ministerial Conference on Counteracting Obesity at the end of which the European Charter to Counteract Obesity has been drafted. Turkey is a signatory of the Charter.	Inflection point: The conference triggers the need to take concrete action
November 2006	European Charter to Counteract Obesity aims to fight obesity and reverse the increasing trend of obesity. For the latter, the charter puts particular emphasis on children and adolescents	Inflection point
February 2010	Turkey Healthy Nutrition and Active Life program promoted and first edition published as Turkey Obesity Control Program	Enabling mechanism
September 2010	Title of the program updated as Healthy Nutrition and Active Life Program (HNAL)	Enabling mechanism
September 2010	HNAL is published as a Prime Ministry Circular	Enabling mechanism

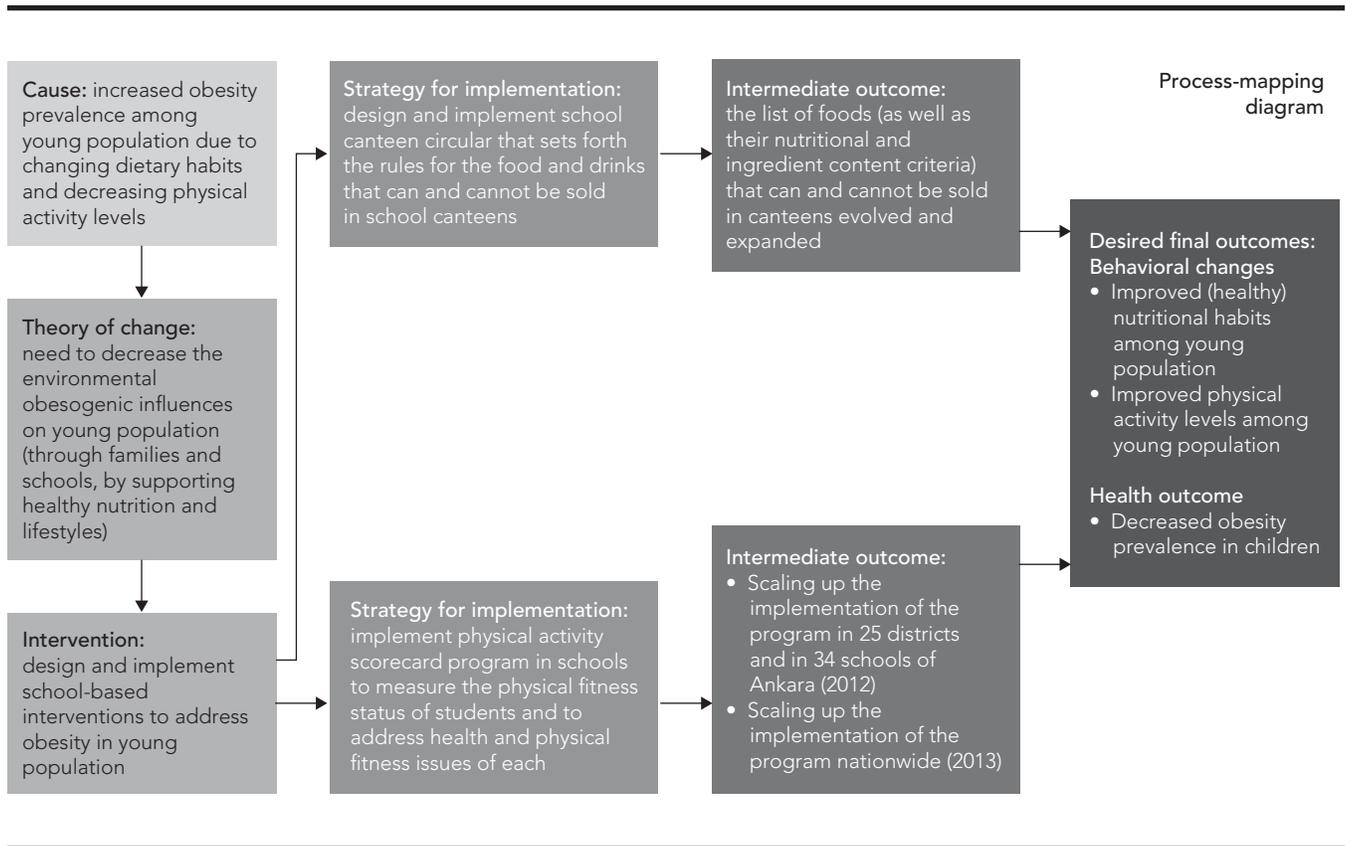
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DATE	EVENT	REMARKS
<b>CIRCULAR FOR FOOD AND DRINK SALES IN SCHOOL CANTEENS</b>		
April 2007	Circular on School Canteen Audits and Hygiene Rules <sup>a</sup>	Enabling mechanism
May 2010	Memorandum on advisory board decision on health and healthy nutrition in schools <sup>b</sup> (MoH General Directorate of Primary Health Care Services)	Inflection point
July 2011	Circular 2011–41 published on food sales in school canteens <sup>c</sup>	Enabling mechanism
May 2012	In May 2012, Frito Lay contacted MoH (through MoNE) and asked for approval of the sales of corn snacks in school canteens. Its request is rejected by MoH.	Pain point
March 2013	Frito Lay sued the MoH (specifically Turkish Public Health Institution)	Pain point
February 2014	The court decided to reject the case	Inflection point
May 2015	The Council of State decided for the rejection of appeal	Inflection point
December 2015	The Council of State ruled for the rejection of decision correction request. The judicial process ended.	Inflection point
2011–2016	Continued work of MoH on the healthy food standards for sales in canteens and criteria for food that can and cannot be sold, leading to a comprehensive food and drink list	Inflection point
March 2016	Circular on the Hygienic Control of School Canteens and of Food and Drink Sales in School Canteens published with an extended and comprehensive list of foods that can and cannot be sold in canteens	Enabling mechanism
May 2016	Federation went to Council of State to sue for the unfair competition created by the circular	Pain point
May 2017	The interim decision of the Council of State has been announced	Pain point
<b>PHYSICAL FITNESS SCORECARD FOR HEALTH IN SCHOOLS</b>		
2009–2010	Initial idea of measuring and documenting the results of physical fitness tests of students conceived	Inflection point
2010–2011	Pilot implementation in a secondary school in Ankara by a team of physical education teachers (as an individual project)	Inflection point
January 2011	Results of the individual pilot is shared in a symposium where MoNE and MoH showed interest in the idea and the project	Inflection point
2012	Scorecard program pilot implementation carried out in Ankara	Inflection point
2013	Results of data analysis from the physical fitness scorecard implementation are presented to MoNE and MoH where both ministries decided to roll out the implementation in Ankara and then nationwide	Inflection point
14 November 2013	The project “Promotion of Physically Active Life” started with the protocol signed between MoH-Public Health Institution, Yildirim Beyazit University and Association for Promotion of Healthy Life Promotion and Health Policies to initiate promote physical activity throughout Turkey	Enabling mechanism
2013–2015	Planning period for the nationwide implementation of the Physical Fitness Scorecard for Health Program	Enabling mechanism
March 2016	Physical Fitness Scorecard for Health and Physical Activity on Prescription Program started within the scope of “Promotion of Physically Active Life” project	Enabling mechanism
April 2016	Physical Fitness Scorecard for Health Program has been approved by the Education and Training Council of Ministry of Education	Enabling mechanism
2016	Preparation of training materials and videos and training for school physical education teachers	Enabling mechanism
2016	Protocol between MoNE and MoH signed for Physical Fitness Scorecard for Health Program. The protocol allows data entry to MoNE e-school databases	Inflection point
April–May 2017	First round of nationwide data entry is done for the Physical Activity Scorecard Program	Inflection point

<sup>a</sup> [http://mevzuat.meb.gov.tr/html/1008\\_0.html](http://mevzuat.meb.gov.tr/html/1008_0.html)<sup>b</sup> [http://diyabet.gov.tr/content/files/okulda\\_diyabet/03\\_cocuklarda\\_sismanlik\\_ve\\_saglikli\\_beslenme/okul\\_sagligi\\_ve\\_beslenmesi\\_danisma\\_kurulu\\_tutanagi.pdf](http://diyabet.gov.tr/content/files/okulda_diyabet/03_cocuklarda_sismanlik_ve_saglikli_beslenme/okul_sagligi_ve_beslenmesi_danisma_kurulu_tutanagi.pdf)<sup>c</sup> [http://diyabet.gov.tr/content/files/okulda\\_diyabet/03\\_cocuklarda\\_sismanlik\\_ve\\_saglikli\\_beslenme/okul\\_kantinleri\\_genelgesi\\_ve\\_ekleri.pdf](http://diyabet.gov.tr/content/files/okulda_diyabet/03_cocuklarda_sismanlik_ve_saglikli_beslenme/okul_kantinleri_genelgesi_ve_ekleri.pdf)

## Annex 2: Process Mapping Diagram



## Annex 3: Interview Questions

### Circular on the Hygienic Control of School Canteens and of Food and Drink Sales in School Canteens

- What is your general opinion for the design and implementation of the circular? Which aspects do seem to be appropriate and which others don't?
- What were the feedback loops (communication and information mechanisms) through which you have been informed about the design and implementation of the circular? How did you find these loops effective? Could there be other ways that would help you to be more engaged?
- How would you describe your Ministry's position throughout the stages of the circular development and implementation? What helped/contributed to improve your engagement in the process?
- How do you see the position and actions of other stakeholders in the process?
- How do you see the role and impact of civil society for the effective implementation of the circular?
- Who/what are the particular actors (in terms of mechanisms, people or circumstances) that helped in making this policy possible?
- How the capacity building and awareness raising activities have been conducted in your institution for the effective implementation of the circular?
- What are the lessons learnt since the first introduction of the circular in 2007 and how are they reflected to the current implementation plan? What are the difficulties encountered and how have they been addressed?
- What are the critical factors and risks that would affect the success and sustainability of this intervention?
- How effective (or how difficult) was working with other stakeholders? What were the main challenges of cooperation and communication?

- How would you describe your position throughout the stages of the circular development and implementation? What helped and contributed to improve your engagement in the process? What are your strategies and action plans to address the changes brought by the circular? What are the difficulties do you encounter and how do you plan to solve them? How do you think the dialogue with the ministries can be improved? How these ministries can support you through this change process?
- How did the implementation of the circular affect the food and beverage sector? What are the reasons for the sector to go to court for the circular implementation? Do you plan to take a different course of action if the court orders are not in line with your expectations?
- How low awareness of families and children on healthy nutrition affect the circular implementation? What factors are important and critical for the success?

### Physical Fitness Scorecard for Health

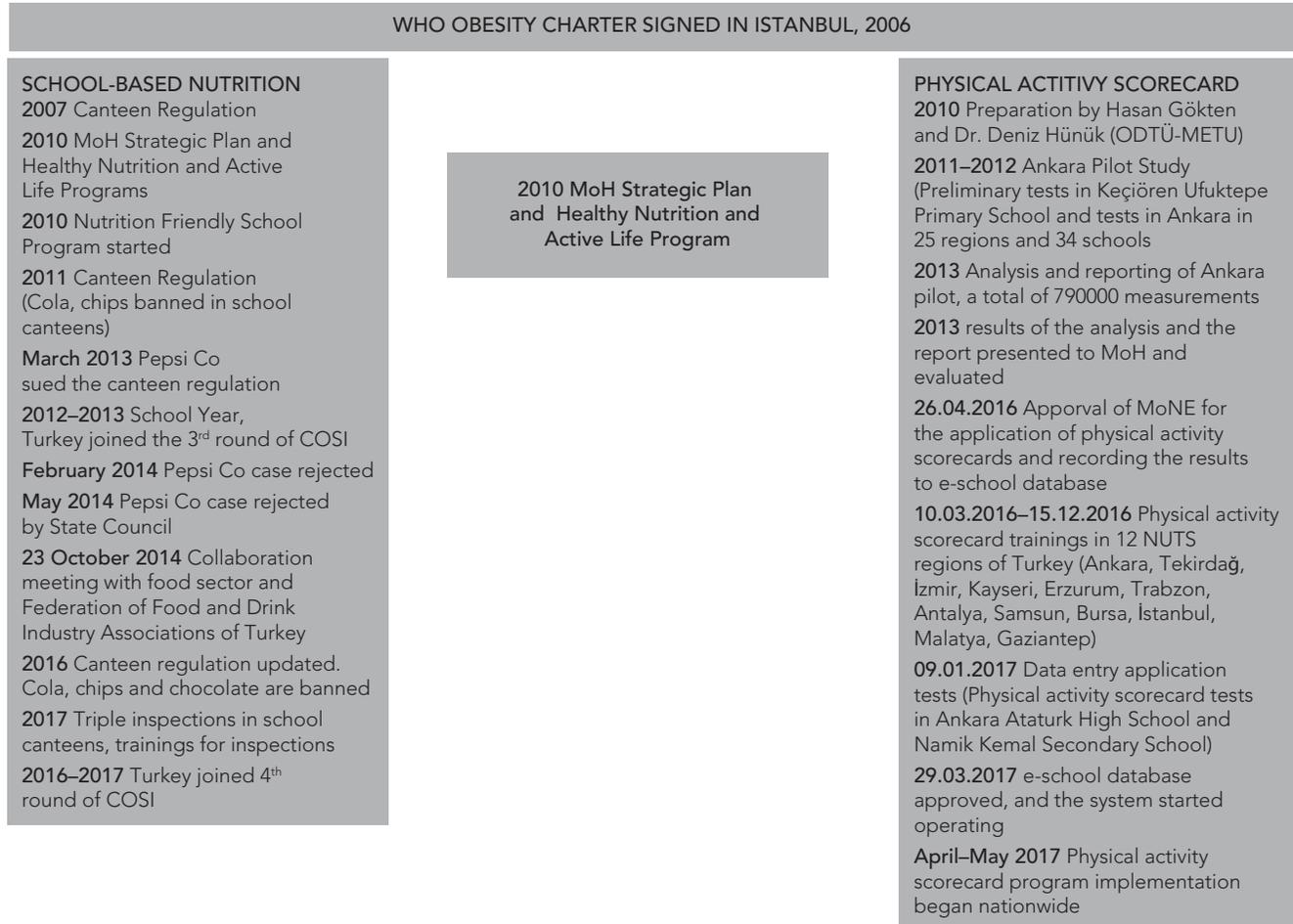
- How did the concept evolve from an idea, through design, through policy dialogue and through pilot, to national implementation?
- How do you see the position and actions of other stakeholders in the process? How did these change or affect the design of the scorecard?
- What are the critical factors and risks that would affect the success and sustainability of this program?
- What are the capacity building and awareness raising activities conducted in your institution for the effective implementation of the program? What are the difficulties encountered? How have they been resolved?
- What are the immediate lessons learnt from the pilot implementation? How will these be reflected to the nationwide implementation?

## Annex 4: Physical Fitness Scorecard for Health Program Implementation



Photos: Courtesy of Hasan Gokten

## Annex 5: MoH's Timeline of Activities for School Based Interventions against Obesity



Source: prepared by MoH's General Directorate of Public Health

## Annex 6: List of Interviewees

NAME	POSITION	ORGANIZATION
Nazan YARDIM	Head of Department, Obesity, Diabetes and Metabolic Diseases Department	General Directorate of Public Health <sup>a</sup> Ministry of Health of Turkey
Sibel GÖGEN	Specialist Physician, Obesity, Diabetes and Metabolic Diseases Department	General Directorate of Public Health Ministry of Health of Turkey
Hatice Berna KARAKAŞ	Dietitian, Obesity, Diabetes and Metabolic Diseases Department	General Directorate of Public Health Ministry of Health of Turkey
Meral ÇARKÇI	Dietitian, Obesity, Diabetes and Metabolic Diseases Department	General Directorate of Public Health Ministry of Health of Turkey
İlknur MENLİK	Secretary General	Federation of Food and Drink Industry Associations of Turkey
Burhan SAKKAOĞLU	Secretary General	Association of Packaged Dairy Industry of Turkey
Selman AYAZ	Head of Department, Department of Food Manufacturers and Codex	Ministry of Food, Agriculture and Livestock
Hasan GÖKTEN	Teacher	Turkish Volleyball Federation High School
Zülfiye SAPANKAYA	Secretary General	Federation of Canteen Operators and Artisan Associations

<sup>a</sup> Formerly known as Public Health Institution of Turkey.



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