



# Fight against obesity in the public health directorate of Izmir, Turkey: "I'm a role model" project, 2012

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## Abstract

*This study's purpose was to determine the nutrition habits and physical activity level of the health workers, to reveal the obesity situation and to try to solve of problems of obese participants, in Izmir Public Health Directorate. This cross-sectional study realized between January and February 2012. Target population constitutes the health workers within the İzmir Public Health Directorate. Body Mass Index values were calculated for 96 participants from a total of 112 health workers (participation rate 86%). The habits of adequate and balanced nutrition and physical activity were questioned via questionnaire which prepared by researchers. Chi-square test and t-test were used for statistical analyses. It has been determined that the frequency of overweight and obesity in men is significantly higher than that of women ( $p < 0.001$ ). The frequency of women who say that they do not have sufficient energy as a reason for not doing physical activity is higher than that of men ( $p < 0.05$ ). Those who were overweight have more regular physical activity than the other groups (normal group and obese group), ( $p < 0.001$ ). As a reason for skipping meals, men who said they had no habit had a higher frequency than women ( $p < 0.05$ ). It was found that 41.7% of men made breakfast at home and 80% of women did it at work ( $p < 0.05$ ). In terms of fight against obesity that includes preventive health and treatment of obese patients, both adequate and balanced daily eating habits and increasing the level of physical activity has a great importance. Within the scope of the "fight against obesity" project initiated within the body of the Izmir Public Health Directorate, as health personnel, sports have been performed collectively for one day a week. In addition, under the "fight against salt", the use of salt in the food of the Izmir Public Health Directorate has been reduced. Thus, the health worker has been successful about having a strong influence in terms of providing the public awareness by changing his / her lifestyle first.*

**Keywords:** Obesity, physical activity, health workers.

## Introduction

Turkey took the first steps in health reform movements in the 1990s<sup>1</sup>. The health care socialization program, which was launched in the 1960s, was abolished and the Health Transformation Program started<sup>2</sup>. With Law on the Pilot Practice of Family Medicine (Turkish original: Aile Hekimligi Pilot Uygulamasi Hakkında Kanun), (Note: After the pilot application, the pilot word was removed from the name of the law), (Law No: 5258, Acceptance Date: 24.11.2004), family medicine applications started in primary health care services in 2005<sup>3</sup>.

A family physician (general practitioner or family physician specialist) and one assistant health personnel (nurse, midwife, and others) establish a Family Physician Unit (FPU). FPU have established a Family Health Center (FHC), (ideally 2 to 6 family physician units). FPU began to serve the population registered to them. Today, "Individual preventive health services" and "Primary medical treatments" are presented in FHCs<sup>4,5</sup>. With a circular, since 2010, a Community Health Center (CHC) has been established in each district to carry out "community preventive health services" and to provide "logistical support to

FHCs"<sup>6</sup>. The duties of CHCs were reorganized in 2015 with a regulation<sup>7</sup>.

On November 2, 2011, the Ministry of Health changed its organizational structure with the Decree Law No. 663. Thus, the "Turkish Public Health Institution (TPHI)", an organization affiliated to the Ministry of Health, was established for family medicine applications and management of preventive health services. Public Health Directorates were established under the framework of the TPHI, for each city<sup>8</sup>. Public Health Directorates and CHCs carry out health promotion programs.

There has been a new change in the Ministry of Health organization in 2017 with the Decree Law No. 694<sup>9</sup>. This is the case in the presentation of primary health care services of Turkey.

One of the most important diseases that family physicians follow is obesity. Obesity is caused by improper nutrition and insufficient physical activity. As well as globally, childhood obesity prevalence increasing in also Turkey. If childhood obesity is not taken care of, it will cause many serious health problems such as heart diseases, stroke, hypertension, cancer,

type 2 diabetes, respiratory system diseases, and orthopedic problems. Today, increasing urbanization, rapid changes in lifestyle and diet, technological developments, constitute the socio cultural causes of an immobile lifestyle<sup>10</sup>.

We can summarize the results of the study reporting the obesity prevalence in the Turkish adult population as follows:

In the Tekharf study realized in 1990, the prevalence of obesity was reported as 12.8% for males, 29.2% for females, and 18.6% for total among 20 and over age population<sup>11</sup>. According to the Turdep-1 (1997) study, obesity prevalence was 12.8% in males over the age of 25 years, 29.2% in females and 22.3% in total<sup>12</sup>. In the Turdep-2 study realized in 2010, obesity prevalence in males over 20 years age was reported as 25.6%, and in females as 41.7%<sup>13</sup>. In a study conducted by Delibasi et al.<sup>14</sup>, between 1999 and 2000, the prevalence of obesity in the population over the age of 18 years age was 7.8% in males, 22.1% in females and 15.6% in total. The METSAR study was conducted among 20 and over years age population in 2006. Metsar reported as 20.6% in males, 39.9% in females and 30.4% in total with a prevalence of obesity<sup>15</sup>. Turkey Nutrition and Health Survey (TNHS, 2010), obesity prevalence among 19 and over age population in Turkey was 34.6%<sup>16</sup>.

The results of "Turkey Chronic Disease and Risk Factors Prevalence Study" were published in 2013. Turkey has obtained the following results for the population of 2011 and 15 years and over: Obesity prevalence is 15% in males and 29% in females. The prevalence of obesity in women is increasing markedly from the age of 35. Obesity is most common in the 55-64 age group in both genders<sup>17</sup>.

In the light of the studies presented above, we can say that obesity in Turkey is a public health problem, today. For this reason, the Ministry of Health of the Republic of Turkey conducts various programs for the fight against obesity.

One of them is "Turkey Obesity Fighting and Control Program (Turkish original: Turkiye Obeziteile Mucadeleve Kontrol Programi) (2010-2014)". The aims of the Program are to increase the level of knowledge of the community in fighting obesity, to provide healthy nutrition and habits of active life, and to reduce the obesity prevalence<sup>18</sup>.

It is necessary to initiate obesity fighting in childhood.

In Turkey, the "Inspection of School Canteens and Hygiene Rules to be Implemented (Turkish original: Okul Kantinlerinin Denetimive Uygulanacak Hijyen Kurallari) circular has been published (10.03.2016).

Sales drinks/foods which are high energy but low nutritional value, that may cause obesity, are restricted with this directive, such as energy drinks, carbonated beverages, chocolates, flavored drinks, fried foods and chips<sup>19</sup>.

Another Project is Nutrition Friendly School Project (Turkish original: Beslenme Dostu Okul Projesi), 2016.

This project is carried out in cooperation with TPHI and Ministry of National Education. This project aims to encourage healthy eating and living conditions in schools and to support good practices in this respect. Fundamental target is to improve school health and to reduce the prevalence of obesity in schools<sup>20</sup>.

Turkish Healthy Nutrition and Active Life Programme (Turkish original: Turkiye Saglikli Beslenmeve Hareketli Hayat Programi) (2014-2017) included a plan of action to increase healthy nutrition awareness and physical activity in the community<sup>21</sup>.

Subsequently, the project "Increasing Physical Activity in Society (Turkish original: Toplumda Fiziksel Aktivitenin Artirilmesi Projesi)" (2015-2018) encouraged the use of bicycles<sup>22</sup>.

One of the most important issues in terms of eating habits in Turkey is excessive salt consumption. Average daily salt intake for healthy adults should be 5 grams per person. Addition, the average daily salt intake in Turkey is 18 grams per person. For this reason, Salt Consumption Reducing Program, Turkey (Turkish original: Turkiye AsiriTuz Tuketiminin Azaltilmasi Programi), (2011-2015) has been implemented. This program was developed for 2017-2021<sup>23</sup>.

Izmir province is one of the most developed cities in Turkey, located in the west of Turkey. For this reason, one of the first family medicine applications was Izmir. In the Health Transformation Program, many pilot studies in the fight against chronic diseases have been carried out in İzmir.

Since the establishment of Izmir Public Health Directorate in 2012, in addition to many field works for fighting obesity, an "Obesity Consultation Unit" has been established at every CHC. Health personnel who have been working İzmir Public Health Directorate has realized the "I'm a role model Project (Turkish Original: Ornek Oluyorum Calismasi)" to become a role model in fighting obesity in 2012.

This study presents the results of the activities conducted on 96 volunteer personnel within the scope of "I'm a role model Project".

This study was realized in İzmir Public Health Directorate in aim to determine the nutrition habits and physical activity level of the health workers, to reveal the obesity situation and to try to solve of problems of obese participants.

## Methodology

This cross-sectional study realized between January and February 2012. Target population constitutes the health workers

within the İzmir Public Health Directorate. In this study, it has been tried to reach the target population, and is not selected a sampling group. This study realized in 96 volunteers (participation rate 86%) from a total of 112 health workers. Body mass indexes were calculated. In addition, the habits of adequate and balanced nutrition and physical activity were questioned via questionnaire which prepared by researchers. Categorical variables were presented as percent, continuous variables as mean ± standard deviation. Chi-square test and t-test were used to compare the variables. Statistical analyzes were performed with SPSS 11.5 statistical program. p<0.05 values were accepted for statistical significance.

### Results and discussion

Women were consisted 74.0% of participants. The mean age of participants was 40.27±8.0 years. The frequencies were overweight and obese were 35.4% and 7.3%, respectively.

Some characteristics of participants were presented in Table-1.

**Table-1:** Some characteristics of participants.

Gender	X ± sd	%
Man	-	26.0
Women	-	74.0
Age (mean ± sd)	40.27 ± 8.0	-
BMI	-	-
Normal	-	57.3
Overweight	-	35.4
Obese	-	7.3

It has been determined that the frequency of overweight and obesity in men is significantly higher than that of women (p<0.001).

Overweight and obese participants are at least 30 years old, at most 40 years old and over age group; overweight and obesity frequency increased with age (p <0.001).

The prevalence of women who say that they do not have sufficient energy as a reason for not doing physical activity is higher than that of men (p <0.05).

Those who were overweight were more regular physical activity than the other groups (normal group and obese group) (p <0.001).

As a reason for skipping meals, men who said they had no habit had a higher frequency than women (p <0.05).

It was found that 41.7% of men made breakfast at home and 80% of women did it at work (p<0.05).

Nutritional and physical activity status of participants was presented in Table-2.

**Table-2:** Nutritional and physical activity status of participants.

	%	
Previously slimming experience	50.0	
The most commonly used attenuation method (physical activity and diet)	29.2	
The most consumed main meal (dinner)	94.8	
Least consumed main course (breakfast)	88.5	
The most consumed snack (after lunch)	51.0	
Persons who never have breakfast	11.5	
Least consumed snack (mid-morning)	17.7	
Reasons for skipping meals as:	No habit	28.0
	Loss of appetite	21.0
	Weight control	13.0
Physical activity	Regularly	15.6
	Irregularly	55.2
	No / low level	29.2
Reasons for no / low level physical activity as:	I do not have enough time	39.6
	no energy / tired	21.0
	I am very busy	13.0

**Discussion:** The end of this study, overweight prevalence was 35.4%, and obesity prevalence was 7.3%, only. As we have seen, the results we have obtained are lower than the Turkey obesity prevalence studies<sup>11-16</sup>. The reason for this may be that this study is done on volunteers.

In our study, obesity was high in men, and it also was increasing with age. Generally, prevalence studies report higher rates of obesity in women. The opposite result in this study can be explained by the fact that only 96 people were included. From the countries near Turkey, when the literature<sup>24-29</sup> which published after 2000 investigate, obesity prevalence was higher in males and in older age groups.

This study showed that women did not have enough energy to do physical activity, compared to men. It may be the reason for

this result that the business woman also assumes the role of housewife at home. For this reason, it is important that the possibility of physical activity in the workplace be provided to the employees, especially the female staff.

It shown that the overweight personnel tended to regular activities more, our study. The reason for this may be cross-sectional as well as the effect of anxiety of being obese in future may be considered.

In volunteers, one of two people had the experience of slimming. One in three of them tried to weaken with physical activity and diet. These findings indicate that volunteers participating in the study are anxious about obesity. However, the prevalence of regular physical activity was only 15.6%. Our nutritional findings also show a bad picture. Nine out of ten have been coming to workplace without breakfast. While suggested eat less than dinner by dieticians, we can make inferences that volunteers participating in the study have excess consumption in dinner. The fact that 80% of female staff have breakfast at workplace is a bad result for a healthy nutrition in a family, especially children. When we look at the reasons for skipping meals, we can say that regular eating habits are inadequate (28%).

When all of our results are addressed, we have come to the conclusion that the volunteers participating in our study tend to be obese in the coming years, because they have not enough healthy eating and regular physical activity habits, even though low prevalence of obesity.

However, we continue to think positively. The positive results of these first steps taken within the scope of fight against obesity will be reflected in the results of the studies to be carried out in future years in İzmir provincial health directorate.

**Limitations:** The cross-sectional nature of this study is the most important limitation. Since the volunteers were not monitored, the effectiveness of the project could not measure. Due to changes in health care, it was not possible to reconsider volunteers in the years to come.

## Conclusion

In terms of fight against obesity that includes preventive health and treatment of obese patients, both adequate and balanced daily eating habits and increasing the level of physical activity has a great importance. Within the scope of the "fight against obesity" project initiated within the body of the İzmir Public Health Directorate, as health personnel, sports have been performed collectively for one day a week. In addition, under the "fight against salt", the use of salt in the food of the İzmir Public Health Directorate has been reduced. Thus, the health worker has been successful about having a strong influence in terms of providing the public awareness by changing his / her lifestyle first.

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