

# Nutritional Traffic Light Labeling and Taxation on Unhealthy Food Products in Iran: Health Policies to Prevent Non-Communicable Diseases

Azizollaah Zargaraan,<sup>1</sup> Rassoul Dinarvand,<sup>2</sup> and Hedayat Hosseini<sup>3,\*</sup>

<sup>1</sup>Department of Food and Nutrition Policy and Planning Research, National Nutrition and Food Technology Research Institute, Faculty of Nutrition Sciences and Food Technology, Shahid Beheshti University of Medical Sciences, Tehran, IR Iran

<sup>2</sup>Department of Pharmaceutics, Faculty of Pharmacy, 2 Nanotechnology Research Centre, Tehran University of Medical Sciences, Tehran, IR Iran

<sup>3</sup>Department of Food Science and Technology, National Nutrition and Food Technology Research Institute, Faculty of Nutrition and Food Technology, Shahid Beheshti University of Medical Sciences, Tehran, IR Iran

\*Corresponding author. Hedayat Hosseini, Department of Food Science and Technology, National Nutrition and Food Technology Research Institute, Faculty of Nutrition and Food Technology, Shahid Beheshti University of Medical Sciences, Tehran, IR Iran. Tel: +98-2122376426, Fax: +98-2122360660, E-mail: hedayat.s.hosseini@gmail.com

**Received** 2017 February 20; **Revised** 2017 April 18; **Accepted** 2017 May 10.

The latest official report on the risk of non-communicable diseases (NCDs) in Iran (2014) reveals that NCDs are accounted for 76% of total deaths in the country, of which, an estimated 46% is due to coronary heart disease and cardiovascular diseases (1). It is believed that obesity and being overweight are the main risk factors for NCDs. The most likely causes of being overweight and obesity are low physical activity and imbalanced intake of different food groups (2).

In order to increase healthy food intakes and to improve the dietary patterns, 2 main policies have been adopted by the ministry of health and medical education (MOHME) in Iran; the first one is the article no. 37 in the 5th national development plan (2011 - 2016), which bans advertising unhealthy goods and services (3). In 2015, this policy was updated by revision of the government's financial regulations, and a maximum tax of 10% was imposed to unhealthy goods and services (4).

The list of unhealthy food products is published by the MOHME on a yearly basis. There has been resistance and complaints from food industries and their associations with regards to this policy in the last couple of years. Unfortunately, the proposed taxation of unhealthy foods has not been run yet due to the unavailability of a number of prerequisites, as well as the mandatory nature of this approach. Another policy in this regard has been the taxation of soft drinks. The Iranian Budget Law for the fiscal year 2013 - 2014 has obligated the government for the taxation of soft drinks at a rate of 15% and 20% for locally produced and imported goods, respectively. This tax should be paid by producers and importers, instead of consumers. Most of the studies showed that taxation on soft drinks had a protective effect on obesity and being overweight among adolescents and children (5). Unfortunately, this policy, however, has not brought the desired effects. Therefore, according to the preliminary results, the taxation of unhealthy

food products has not worked as it was initially expected. On the other hand, reports showed that placing a limitation on advertising unhealthy food products was also unsuccessful in Iran. Etemad et al. reported that, within a 30-day period (from January 20 to February 3 and from August 23 to September 6, 2013), 612 cases of unhealthy food products (based on the list published by the MOHME) were advertised in 4 main Iranian official TV Channels (6).

Besides pricing strategies, guiding consumers to buy healthier food products is a relatively new food policy for preventing NCDs. Due to the critical role of food labeling on health and control of NCDs, the world health organization (WHO) introduces nutrition labeling as an essential approach of its global strategy on diet, physical activity, and health (1). In order to improve health status, policy makers try labeling as a means to change the purchasing behavior of consumers (7, 8). Thus, another policy, which is also being implemented in Iran, is traffic light labeling for content of fat, sugar, salt and trans-fatty acids of food products.

The related project started in 2014 by the food and drug administration (FDA) of I. R. Iran as a voluntary activity for 2 years, and changed to a mandatory process from 2016 (9).

Despite some uncertainties regarding the cooperation from the food industry side, the available data shows relatively high compliance levels in various food categories. A recent unpublished survey by the FDA revealed that 73% of local and 61% of imported food products, which are sold in Tehran's chain stores between September 2015 and September 2016, had traffic light labeling. High degree of participation and cooperation of stakeholders in the development of the project could be regarded as a successful experience to obtain multi-sector collaboration to enact the health policies. Comparison of the results of the aforementioned policies shows that inclusion of a voluntary step may increase the cooperation of some key stakeholders,

such as food industries in health-oriented endeavors.

It is interesting to note that, despite the importance of food labeling on consumer preferences, far too little attention has been paid to this issue in Iran, and there are little and paradoxical published data in this area. Malek Mahdavi et al. (2012) assessed knowledge, attitude, and practice of 322 medical university students about food labeling in Tabriz, east Azerbaijan. Of the study population, 47.6% reported the use of nutritional facts table in point of purchase (10). While in an analysis of knowledge and practice of consumers about food labeling in chain stores in Tehran, Mirghotbi et al. (2012) reported that only 4.6% of consumers use the food labeling to acquire nutritional information.

Traffic light labeling of food products is recruited to prevent NCDs in Iran. Therefore, because of limited data available on the relation between food labeling and consumer behavior in Iran and as a follow-up to the effective contribution of different stakeholders in the traffic light labeling process, it is recommended that further research be undertaken in the following areas: evaluating the perceptions and use of traffic light food labeling among Iranian consumers, monitoring of correct labeling of food products, and mapping the nutritional profile of Iranian food products. In the meantime, more studies are required to determine the effectiveness of traffic light labeling on nutritional status of the Iranian consumers. This study was limited by the lack of published literature which focuses on the effect of labeling and taxation of food products on health parameters in Iran.

## Footnote

**Conflict of Interest:** The authors declare no conflicting or financial disclosures.

## References

1. WHO . Iran 2014. Available from: [http://www.who.int/nmh/countries/irn\\_en.pdf](http://www.who.int/nmh/countries/irn_en.pdf).
2. Akerman Frid S, Josman N, Endevelt R. Development and standardization of the "Let's Shop" questionnaire: an assessment of shopping habits and executive functions in people with obesity. *Food Sci Nutr*. 2017;**5**(3):446-53. doi: [10.1002/fsn3.412](https://doi.org/10.1002/fsn3.412). [PubMed: [28572929](https://pubmed.ncbi.nlm.nih.gov/28572929/)].
3. Moghaddam AV, Damari B, Alikhani S, Salarianedeh MH, Rostami-gooran N, Delavari A, et al. Health in the 5th 5-years Development Plan of Iran: main challenges, general policies and strategies. *Iran J Public Health*. 2013;**42**(Suppl):42.
4. WHO . The incorporation of articles into law as part of the government's financial regulations, article 48. ; 2015.
5. Fletcher JM, Frisvold DE, Tefft N. The effects of soft drink taxes on child and adolescent consumption and weight outcomes. *J Public Econ*. 2010;**94**(11-12):967-74. doi: [10.1016/j.jpubeco.2010.09.005](https://doi.org/10.1016/j.jpubeco.2010.09.005).
6. Etemad K, Heidari A, Lotfi M. The Television Advertisements of Health-threatening Products. *J Health Res Commun*. 2016;**2**(3):61-5.
7. Eneccoff NC, Keane CR, Albert SM. Health behavior change in advance care planning: an agent-based model. *BMC Public Health*. 2016;**16**:193. doi: [10.1186/s12889-016-2872-9](https://doi.org/10.1186/s12889-016-2872-9). [PubMed: [26924203](https://pubmed.ncbi.nlm.nih.gov/26924203/)].
8. Sheeran P, Klein WM, Rothman AJ. Health Behavior Change: Moving from Observation to Intervention. *Annu Rev Psychol*. 2017;**68**:573-600. doi: [10.1146/annurev-psych-010416-044007](https://doi.org/10.1146/annurev-psych-010416-044007). [PubMed: [27618942](https://pubmed.ncbi.nlm.nih.gov/27618942/)].
9. Iran FADAO TIRO . Guideline for nutritional traffic light. ; 2015.
10. Malek Mahdavi A, Abdolahi P, Mahdavi R. Knowledge, Attitude and Practice between Medical and Non-Medical Sciences Students about Food Labeling. *Health Promot Perspect*. 2012;**2**(2):173-9. doi: [10.5681/hpp.2012.020](https://doi.org/10.5681/hpp.2012.020). [PubMed: [24688931](https://pubmed.ncbi.nlm.nih.gov/24688931/)].