



Problems and Solutions of Taxation to Control Unhealthy Goods: A Qualitative Study

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Abstract

Background: Taxes on unhealthy goods, in addition to reducing the consumption of these goods, preventing related diseases, and promoting public health, can provide significant financial resources for the health sector.

Objectives: The purpose of this study was to investigate the problems and solutions of taxation to control the consumption of unhealthy goods to improve public health.

Methods: This qualitative study was conducted in 2021. Semi-structured interviews with open-ended questions were held to collect information. Sampling was performed by purposive and snowball methods with 31 managers and key experts. The data were analyzed using the content analysis method. MAXQDA software (version 12) was used for classification and coding.

Results: This study labeled 2 main themes and 10 subthemes. The main themes included problems of controlling unhealthy goods and solutions to controlling unhealthy goods. Poor decision-making, planning, and execution, production-related problems, smuggling and poor supervision, increased consumption of harmful goods, conflicts of interest, and advertisements of unhealthy goods are the most important of these problems. Imposing taxes, duties, and price hikes, providing alternatives, paying attention to all determinants of supply and demand, and taxation on advertising are also solutions to control unhealthy products.

Conclusions: The health level of individuals should be improved by imposing taxes on unhealthy goods, determining accurate tax rates, and simultaneously using measures, such as providing alternatives to unhealthy goods and controlling advertisements. Paying serious attention to the list of harmful goods, coordination and cooperation of related organizations in formulating and implementing tax policies, and providing suitable alternatives to harmful products are the practical suggestions of this study.

Keywords: Control, Problems, Solutions, Tax, Unhealthy

1. Background

Unhealthy goods reduce the health level of individuals and impose the cost of being unhealthy and disease on individuals, families, and society (1). Harmful goods, such as solid and semi-solid oils, trans oils, sugar, salt, carbonated drinks, and cigarettes, play an important role in the spread of noncommunicable diseases and the increase in health costs (2).

Fiscal instruments, such as taxes and subsidies, play an important role in promoting healthy behaviors and modifying lifestyles (3, 4). The most important impacts of a higher tax on unhealthy products will be the change in consumer choices, the change in demand for these products, the shift in consumption patterns, and the promotion of healthy lifestyles, which will reduce the prevalence of disease and healthcare costs (5). Governments can use

fiscal tools to regulate prices and reduce the consumption of harmful goods (6).

Imposing taxes on harmful goods not only improves public health (7) but also provides revenues to governments (8). These revenues are very attractive to managers and policymakers, and these sources of income can be used for the sustainable financing of health systems (9).

A study by the World Health Organization (WHO) has shown that a 10% growth in the price of harmful goods reduces the consumption of these goods, which is 4% in developed countries and 8% in developing countries (10).

A study in South Africa similarly demonstrated that taxation on sugary drinks could prevent the loss of 72,000 deaths and 550,000 years of healthy living and reduce health expenses by \$5 billion (11). Additionally, according to a study in Vietnam, increasing taxes on tobacco prevented the loss of \$57 billion of resources (12).

In Iran, despite the high consumption of harmful goods, such as tobacco, the prices of these goods and taxes on them have not increased much. For example, the total share of tobacco tax as a percentage of the retail price is only 21.7% (13), which is far below the minimum of 75% recommended by the WHO (14). In addition, the evidence in Iran has shown that the incidence of obesity, overweight, hypertension, and cardiovascular diseases has increased significantly, among which the consumption of unhealthy foods and beverages has been one of the most important factors (15).

According to surveys, only a few studies have been carried out about the tax challenges and problems and tax solutions in controlling the consumption of unhealthy goods in Iran (16). Although qualitative research enables a deeper understanding of experiences, phenomena, and context and helps extend knowledge and understanding of realities (17), most studies on taxes on harmful goods have been performed quantitatively, and qualitative studies in this field are limited.

2. Objectives

Considering that unhealthy goods are among the major causes of morbidity and mortality worldwide (including in Iran) and impose massive financial and non-financial costs directly and indirectly on individuals and governments, dealing with them (particularly reducing the consumption of unhealthy goods) should be considered seriously. Accordingly, the main purpose of this study was to examine the problems and solutions related to taxation to control the production and consumption of unhealthy goods, promote public health, and finance the health system.

3. Methods

3.1. Study Design

The present qualitative study was conducted in 2021. This study followed the Consolidated Criteria for Reporting Qualitative Research (COREQ) Checklist (18). The qualitative study approach was based on the content analysis theory, and the research paradigm was interpretive.

3.2. Participants and Setting

The statistical population of this study consisted of managers, policymakers, deputies, and key experts from the Iran National Tax Administration (INTA), the Ministry of Health and Medical Education, members of the Islamic Parliament of Iran, and professors and key experts from reputable universities in Iran. The inclusion criteria in this

study included at least a master's degree or a medical doctorate (MD), at least 5 years of executive or academic experience in the field of economics and health, and willingness to participate in the interview. The determination of the sample size and the selection of the interviewees were performed according to the data saturation and to obtain the most information about the subject. Both purposive and snowball sampling methods with maximum variation were also employed. In total, 31 managers, deputies, policy-makers, and key experts were interviewed upon obtaining their consent. After coordinating, most of the interviews were conducted in person, and some were conducted by phone calls as wished by the interviewees. Face-to-face interviews were conducted at the interviewees' workplaces in Tehran, Iran, and Shahid Beheshti Universities of Medical Sciences, INTA, the Ministry of Health, and the Islamic Parliament of Iran. In a special form, the characteristics of the interviewee, the place and date of the interview, non-linguistic reactions related to the interview, and other necessary information were also recorded.

3.3. Data Collection

The initial interview questions were identified using research background and expert opinions. To ensure the validity and significance of the questions, pilot interviews were conducted with three members of the statistical population who were not among the selected participants. As a result, the type and order of the questions were determined; the questions that were incomprehensible to the interviewees were revised; finally, the final questions of the interview were formed. In this study, eight guide questions were asked about various dimensions of taxes on unhealthy goods, especially the problems and solutions to controlling these goods. For example, one of the questions is as follows:

Do you think the current rate of taxes on harmful products, such as cigarettes, fatty foodstuff, and sugar-sweetened beverages (SSBs), is appropriate? If not, why?

The interviews were conducted in a semi-structured manner with open-ended questions and by prior appointments over 9 months. The interview sessions were also recorded with the permission of the interviewees. The interviews were also transcribed after the end of each session to become aware of the data saturation time and increase their accuracy. The average time of each interview was 55 and 40 minutes for face-to-face and telephone interviews, respectively.

3.4. Trustworthiness of Data

The accuracy and precision of the data were further determined based on the four criteria of credibility, transferability, dependability, and confirmability (19). To ensure

the credibility of the data, peer debriefing and allocating enough time for data collection were used. The transferability of the data was also provided through interviews with different informants from various organizations. To ensure the dependability criterion, the study process was reviewed by quality consultants, and the research results were confirmed. To meet the confirmability of the data, peer checks and a review of manuscripts were used.

3.5. Data Analysis

To analyze the data, the content analysis method was used. After conducting the interviews, their transcriptions were read several times to gain a general understanding. In addition, the transcribed interviews were sent to some interviewees to add or subtract some issues as needed. Finally, the transcribed interviews were entered into MAXQDA software (version 12) for classification, and the initial codes were extracted. Then, the final codes and themes were obtained with the cooperation and comments of the members of the research team. Finally, the codes were grouped into main themes and subthemes. Three researchers were involved in the data analysis.

3.6. Ethical Considerations

This article was approved by Tehran University of Medical Sciences, with the ethics code of IR.TUMS.SPH.REC.1398.332. Before the interviews, the research objectives (along with the arrangements required to maintain the confidentiality of the data) were presented orally to all the interviewees, and written consent was obtained.

4. Results

According to the transcribed interviews and a review of relevant texts, 2 main themes and 10 subthemes were identified in this study. The main themes included problems of controlling unhealthy goods and solutions to controlling unhealthy goods. A total of 31 managers, deputies, policymakers, and key experts were interviewed upon obtaining their consent. Tables 1 and 2 show the information about the employment place of the interviewees and demographics, respectively.

4.1. Problems of Controlling Unhealthy Goods

4.1.1. Poor Decision-making, Planning, and Execution

According to the interviewees, the most important challenges in decision-making, planning, and implementing a tax policy for controlling unhealthy goods included the complexity of the tax system, the non-deterrence of taxes, the relatively poor coordination and cooperation of

Table 1. Employment Place of the Interviewees

Employment Place	No. (%)
Tehran University of Medical Sciences	7 (22.58)
Iran University of Medical Sciences	1 (3.23)
Shahid Beheshti University of Medical Sciences	1 (3.23)
Ministry of Health and Medical Education	7 (22.58)
Islamic Parliament of Iran	3 (9.68)
Iran National Tax Administration	12 (38.71)
Total	31 (100)

Table 2. Demographic Information of the Participants

Variables	No. (%)
Gender	
Male	30 (96.77)
Female	1 (3.23)
Age (y)	
30 - 40	8 (25.81)
41 - 50	6 (19.35)
51 - 60	13 (41.94)
Over 60	4 (12.90)
Work experience (y)	
5 - 10	3 (9.68)
11 - 20	9 (29.03)
21 - 30	10 (32.26)
Over 30	9 (29.03)
Education level	
Master's degree	13 (41.94)
Medical doctorate (MD)	5 (16.12)
PhD	13 (41.94)

the country's legislative and executive bodies, the multitude of government bodies in charge of dealing with the issue, inexact and outdated tax codes, the lack of enough information about unhealthy goods, poor commitment to deal with the issue, inadequate supervision, and conflicts of interest.

“The excessive consumption of harmful goods and the increase in related diseases and their injuries are partly due to incorrect tax policies and pricing. Weaknesses in the enforcement of regulatory and control laws and poor tax structures are two important reasons in this respect.” (Interviewee from Iran University of Medical Sciences)

4.1.2. Production-related Problems

The interviewees stated that imposing a tax on harmful products will increase their prices and cause problems for manufacturers.

“When we increase taxes, the increased cost of the harmful product will reduce the demand, which will damage the manufacturer. Naturally, manufacturers have to lower their prices to prevent sales drop.” (Interviewee from the Ministry of Health)

4.1.3. Smuggling and Poor Supervision

Although the impact of a tax increase on the smuggling of taxed goods into the country needs to be considered, there is not much evidence about this impact. The interviewees believed that poor supervision would be a serious problem in managing the effect of taxes on harmful goods.

“Experience and scientific evidence show that smuggling is not usually caused by tax policies or the rising prices of domestically produced products. The source of the illegal trade of harmful goods can be traced back to legal, administrative, and regulatory inadequacies, government’s poor capability in managing taxes, poor economic conditions, poor quality of some domestically produced products, and even cultural problems.” (Interviewee from the Islamic Parliament of Iran)

4.1.4. Increased Consumption of Harmful Goods

Taxing some harmful goods or raising their prices might lead to the increased consumption of other harmful goods or the increased incidence of certain risky behaviors due to reduced access to the original goods.

“After taxing harmful goods, the market will be full of low-quality alternatives and counterfeits, which could be even cheaper and more damaging than the originals.” (Interviewee from Tehran University of Medical Sciences)

4.1.5. Conflicts of Interest

Since some individuals, organizations, and businesses greatly benefit from the production, distribution, and trade of unhealthy goods, conflicts of interest will be a major obstacle to the implementation of higher taxes on many of these goods.

“Rising taxes on harmful goods might hurt the economic interests of some individuals. Therefore, they will do everything they can to prevent it.” (Interviewee from the INTA)

4.1.6. Advertisements of Unhealthy Goods

Most interviewees stated that advertisements for unhealthy goods would increase the consumption of these

goods. This increase is observed much more in children and teenagers and endangers their health.

“When a product is advertised, its consumption increases and some products should not be encouraged to be consumed. In many cases, the content of advertisements is very misleading and is not properly monitored.” (Interviewee from the Ministry of Health)

4.2. Solutions to Controlling Unhealthy Goods

4.2.1. Imposing Taxes, Duties, and Price Hikes

According to most participants interviewed in this study, one of the best ways to control unhealthy goods is to levy higher taxes and duties and raise their prices. The tax increase must be purposeful and proceed in stages and can be reduced or reversed upon reaching the envisioned objectives about products or production processes.

“To reduce the consumption of harmful goods, we have to make them harder to achieve; we will make them so expensive that, firstly, individuals cannot buy harmful goods, and secondly, if they consume them and get the disease, we will compensate the treatment costs from the consumption tax.” (Interviewee from Tehran University of Medical Sciences)

“There are numerous harmful goods, and their share in the consumer goods should be reduced. Therefore, we have to tax them. These taxes should increase to the point that individuals can no longer afford them.” (Interviewee from the INTA)

4.2.2. Providing Alternatives

According to some interviewees, imposing higher taxes on unhealthy goods will boost the production of healthier or less harmful goods. Tax breaks and discounts can also be used to encourage the production and use of high-quality, healthier alternatives.

“If we work more on alternatives, imposing taxes and price hikes on harmful goods can boost industries that make healthy goods, which will also boost jobs in that sector.” (Interviewee from the Islamic Parliament of Iran)

“When we prohibit individuals from consuming an unhealthy product that is delicious by increasing the price, we must have an alternative with the same taste to increase the positive effects of the tax.” (Interviewee from Shahid Beheshti University of Medical Sciences)

4.2.3. Paying Attention to All Determinants of Supply and Demand

The demand and supply of unhealthy goods can be a function of many factors. Therefore, before adopting tax and non-tax measures for controlling them, the reasons why these goods are consumed should be determined. In

addition to being a function of price, demand for harmful goods is also a function of beliefs, habits, advertising, and goods quality.

“For our tax measures to be effective, we need to influence consumer choices and decisions. If we work on the pricing and quality of our goods or their appearance, demand and consumption will improve.” (Interviewee from Iran University of Medical Sciences)

4.2.4. Taxation on Advertising

The correct use of taxes and duties, along with culture building, prohibiting advertisements, paying attention to the effects of advertisements, monitoring the content of advertisements, and issuing licenses, are the most important tools to control the advertising of unhealthy goods.

“We can tax the advertising of harmful goods. With the expansion of advertising and its display in public media, taxes and duties should also increase. Tax coefficients on the advertising of goods that cause more damage to health should also be higher.” (Interviewee from the Ministry of Health)

5. Discussion

Unhealthy goods tend to have major health and financial implications for individuals, families, and society. The demand for these goods can be reduced by using taxation measures to raise their prices and encourage consumers to use less harmful alternatives, an approach that can contribute to public health and help maintain the financial sustainability of the healthcare system. According to the interviews in this study, two main themes were established, including problems of controlling unhealthy goods and solutions to controlling unhealthy goods.

The problems of controlling unhealthy goods include poor decision-making, planning, and execution, production-related problems, smuggling and poor supervision, increased consumption of harmful goods, conflicts of interest, and advertisements of unhealthy goods. Additionally, the solutions to controlling unhealthy goods included imposing taxes, duties, and price hikes, providing alternatives, paying attention to all determinants of supply and demand, and taxation on advertising.

Many countries have implemented plans to introduce taxes on SSBs and foods high in salt, fat, and sugar (20-22). Moreover, tobacco taxation policies have been implemented to improve health in numerous countries (23-25).

Taxes on unhealthy goods should be a part of a multi-pronged strategy and action rather than a sole measure for preventing diseases or solving problems. The results of the present study showed that tax measures influenced behavioral and social patterns.

Such taxation policies will also face numerous challenges and problems, the most important of which include poor decision-making/planning/execution and production-related problems. These problems need to be studied in partnership with relevant government agencies, especially the ministries of health, industry, economy, and agriculture, to determine the best approach to address and solve them. According to a study by Tamir et al., barriers related to these taxes include opposition from various sectors, technical and bureaucratic obstacles to tax implementation, problems in defining taxes on goods, and opposition from the treasury to earmark tax revenue for health education (26).

To control unhealthy goods, the opposition and resistance of some industries to the taxation of harmful goods must also be controlled. For example, increasing prices to reduce the consumption of unhealthy products might lead to opposition from many industries and manufacturers (2). Ross et al. showed that the tobacco industry implements seven strategies and actions to oppose and counteract the effects of tobacco tax, including stockpiling, changing product attributes or production processes, lowering prices, over-shifting prices, under-shifting prices, the timing of price increases, and engaging in price discrimination and/or offering promotions (27). The present study also showed that some industries are opposed to increasing taxes on harmful goods because with increasing taxes and prices of these goods, consumption will decrease, and as a result, their profitability will decrease.

To improve the effectiveness of tax measures in controlling unhealthy goods, on the one hand, further work needs to be conducted on providing high-quality, healthier alternatives, and, on the other hand, serious attention should be paid to all factors that might affect supply and demand (especially prices), individuals' purchase power/beliefs/habits/culture, advertisements, and the quality of goods. There is scientific evidence suggesting that the environment in which individuals choose their diet and their ability to afford healthy foods have a huge impact on their diet (28).

On the other hand, one should pay attention to the price and income elasticity of demand. The rate of the reduction of demand and who is most affected by prices depend on consumers' price elasticity of demand. For example, demand for most foods is not elastic, and industries can shift price increases to consumers (29). Therefore, tax policies should create significant behavioral changes.

It is necessary to determine tax rates accurately for the success of tax policies and the proper implementation of these policies. For example, the WHO has recommended that the tax rate on SSBs should be at least 20% (30).

In addition to taxes, complementary measures (e.g.,

banning advertising and banning the use of goods, such as tobacco, in public) can help better deal with these goods (31). The allocation of subsidies to healthy food, improvement of public health awareness, accessibility to healthy foods, creation of a health-promoting environment, and proper nutrition in schools and workplaces are some of the most important recommendations to better deal with harmful goods (32). The results of the present study also emphasize performing and following complementary measures, especially banning advertising and raising public awareness. Increasing the taxes on unhealthy goods should encourage individuals to use healthier options (e.g., fruits and vegetables), especially children and young people. Therefore, to promote consumption patterns, taxing unhealthy goods should be applied, and healthy goods should be subsidized.

The current study showed that to deal with the opposition of some industries, the government and the parliament should respond appropriately to face the opposition and increase the supervision of industries and markets while setting the necessary laws for collecting taxes and considering the executive guarantee of these laws. According to a study by Ross et al., monitoring and analyzing the industry behavior will develop tax performance (27).

5.1. Recommendations

Regarding research findings, it is suggested that all harmful goods listed by the Ministry of Health should be given enough attention, and suitable alternatives should be provided for these goods. In addition, more attention should be paid to the deterrence of tax laws and guidelines related to unhealthy goods and their executive guarantee. Purposeful planning should be done to properly allocate and use the tax revenues from unhealthy goods, and the spending of these revenues should be transparent and closely and regularly monitored. Furthermore, more attention should be paid to culture building and raising public awareness about the effects of unhealthy goods. On the other hand, the investment in healthy industries and goods and renovation of production equipment should be followed seriously. It is suggested to conduct further studies regarding the list of harmful goods published by the Ministry of Health, the importance and effects of different tax rates, and the relationship and effects of taxes with the elasticity of unhealthy goods.

5.2. Strengths and Limitations

The strength of this study was interviews with policymakers, managers, and experts from different organizations related to the subject and professors of important universities. The study of problems and solutions of

taxation to control unhealthy goods from various aspects and the relationship of the taxes on these goods with the goals and functions of the healthcare sector were other strengths of this study. The most important limitation of the present study was the concurrence of the study with the coronavirus disease 2019 (COVID-19) pandemic, especially the limitations on face-to-face interviews. The coordination of face-to-face interviews was difficult and time-consuming due to the spread of COVID-19, and some interviews were conducted over the phone due to the sensitivity of the interviewees.

5.3. Conclusions

The taxation of unhealthy goods due to the negative effects of these goods should be pursued seriously within the framework of specific rules and programs. The problems and challenges related to unhealthy goods and related solutions, both from the tax and non-tax aspects, should be appropriately identified and investigated. Numerous strategies to improve public health require proper policy-making, legislation, planning, implementation, and monitoring, especially in the financing, prioritization reform approaches, and cooperation and coordination on health issues. Taxes on harmful goods could be the most important requirements and facilitators in this regard.

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Footnotes

Authors' Contribution: The conceptualization and design of the study were performed by H. D., S. E., and M. K. Data collection, coding, and data analysis were carried out by M. K. Project supervision was conducted by H. D., and M. K. was a major contributor to writing the manuscript. All the authors read and approved the final manuscript.

Conflict of Interests: The authors declare that they have no conflict of interests.

Data Reproducibility: Since the present study was qualitative, based on the statements of the participants in a section of the informed consent form, the participants only allowed the researchers to publish the findings as a whole. Therefore, it was not permitted to provide the research data and materials in public or in an appendix. However,

the research team is committed to providing some data if requested by other researchers by e-mail to the authors.

Ethical Approval: This study was approved by the Institutional Research Ethics Committee of School of Public Health and Allied Medical Sciences, Tehran University of Medical Sciences, Tehran, Iran, with the ethics code of IR.TUMS.SPH.REC.1398.332. This study and all relevant methods were carried out in accordance with the guidelines and regulations of the Declaration of Helsinki.

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Informed Consent: Informed consent was obtained from all the participants in this study.

References

- Mytton OT, Clarke D, Rayner M. Taxing unhealthy food and drinks to improve health. *BMJ*. 2012;**344**. e2931. [PubMed ID: 22589522]. <https://doi.org/10.1136/bmj.e2931>.
- World Health Organization; Regional Office for Europe. *Using price policies to promote healthier diets*. Copenhagen, Denmark: World Health Organization. Regional Office for Europe; 2015. vi + 42 p p.
- Sassi F, Belloni A, Capobianco C. *The Role of Fiscal Policies in Health Promotion*. 66. Paris, France: OECD Health Working Papers; 2013. <https://doi.org/10.1787/5k3twr94kvzx-en>.
- Niebylski ML, Redburn KA, Duhaney T, Campbell NR. Healthy food subsidies and unhealthy food taxation: A systematic review of the evidence. *Nutrition*. 2015;**31**(6):787–95. [PubMed ID: 25933484]. <https://doi.org/10.1016/j.nut.2014.12.010>.
- Nomaguchi T, Cunich M, Zapata-Diomedes B, Veerman JL. The impact on productivity of a hypothetical tax on sugar-sweetened beverages. *Health Policy*. 2017;**121**(6):715–25. [PubMed ID: 28420538]. <https://doi.org/10.1016/j.healthpol.2017.04.001>.
- Sassi F, Belloni A, Mirelman AJ, Suhrcke M, Thomas A, Salti N, et al. Equity impacts of price policies to promote healthy behaviours. *Lancet*. 2018;**391**(10134):2059–70. [PubMed ID: 29627166]. [PubMed Central ID: PMC6642722]. [https://doi.org/10.1016/S0140-6736\(18\)30531-2](https://doi.org/10.1016/S0140-6736(18)30531-2).
- Smith E, Scarborough P, Rayner M, Briggs ADM. Should we tax unhealthy food and drink? *Proc Nutr Soc*. 2018;**77**(3):314–20. [PubMed ID: 29332613]. [PubMed Central ID: PMC5912513]. <https://doi.org/10.1017/S0029665117004165>.
- Summan A, Stacey N, Birckmayer J, Blecher E, Chaloupka FJ, Laxminarayan R. The potential global gains in health and revenue from increased taxation of tobacco, alcohol and sugar-sweetened beverages: a modelling analysis. *BMJ Glob Health*. 2020;**5**(3). e002143. [PubMed ID: 32337082]. [PubMed Central ID: PMC7170424]. <https://doi.org/10.1136/bmjgh-2019-002143>.
- OECD. *Fiscal Sustainability of Health Systems*. Paris, France: OECD Health Working Papers; 2015. <https://doi.org/10.1787/9789264233386-en>.
- New Delhi, India; 2006.SEA/RC59/5 Rev.1 - Regional strategy for health promotion: follow-up of the sixth global conference on health promotion.
- Manyema M, Veerman LJ, Tugendhaft A, Labadarios D, Hofman KJ. Modelling the potential impact of a sugar-sweetened beverage tax on stroke mortality, costs and health-adjusted life years in South Africa. *BMC Public Health*. 2016;**16**:405. [PubMed ID: 27240422]. [PubMed Central ID: PMC4886444]. <https://doi.org/10.1186/s12889-016-3085-y>.
- Minh HV, Duyen NT, Ngan TT, Ngoc NB, Son DT, Hai PT. Potential health impacts of increasing the cigarette tax in Viet Nam. *Int J Tuberc Lung Dis*. 2018;**22**(11):1378–82. [PubMed ID: 30355420]. <https://doi.org/10.5588/ijtld.18.0161>.
- World Health Organization. *WHO report on the global tobacco epidemic, 2021, Addressing new and emerging products*. Geneva, Switzerland: World Health Organization; 2021.
- World Health Organization. *Promoting taxation on tobacco products*. Geneva, Switzerland: World Health Organization; 2015. Available from: <https://www.who.int/europe/activities/promoting-taxation-on-tobacco-products>.
- Payab M, Kelishadi R, Qorbani M, Motlagh ME, Ranjbar SH, Ardalan G, et al. Association of junk food consumption with high blood pressure and obesity in Iranian children and adolescents: the CASPIAN-IV Study. *J Pediatr (Rio J)*. 2015;**91**(2):196–205. [PubMed ID: 25449791]. <https://doi.org/10.1016/j.jpmed.2014.07.006>.
- Afshari F, Javadi Nasab H, Valizadeh B. [Value added tax in goods and services harmful to health]. *National conference on value added tax: opportunities and challenges*. Mashhad, Iran. 2017. Persian.
- Cleland JA. The qualitative orientation in medical education research. *Korean J Med Educ*. 2017;**29**(2):61–71. [PubMed ID: 28597869]. [PubMed Central ID: PMC5465434]. <https://doi.org/10.3946/kjme.2017.53>.
- Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *Int J Qual Health Care*. 2007;**19**(6):349–57. [PubMed ID: 17872937]. <https://doi.org/10.1093/intqhc/mzm042>.
- Glaser BG. Conceptualization: On Theory and Theorizing Using Grounded Theory. *Int J Qual Methods*. 2016;**1**(2):23–38. <https://doi.org/10.1177/160940690200100203>.
- Mytton OT, Eyles H, Ogilvie D. Evaluating the Health Impacts of Food and Beverage Taxes. *Curr Obes Rep*. 2014;**3**(4):432–9. [PubMed ID: 26626920]. <https://doi.org/10.1007/s13679-014-0123-x>.
- Colchero MA, Rivera-Dommarco J, Popkin BM, Ng SW. In Mexico, Evidence Of Sustained Consumer Response Two Years After Implementing A Sugar-Sweetened Beverage Tax. *Health Aff (Millwood)*. 2017;**36**(3):564–71. [PubMed ID: 28228484]. [PubMed Central ID: PMC5442881]. <https://doi.org/10.1377/hlthaff.2016.1231>.
- Thow AM, Downs SM, Mayes C, Trevena H, Waqanivalu T, Cawley J. Fiscal policy to improve diets and prevent noncommunicable diseases: from recommendations to action. *Bull World Health Organ*. 2018;**96**(3):201–10. [PubMed ID: 29531419]. [PubMed Central ID: PMC5840623]. <https://doi.org/10.2471/BLT.17195982>.
- Verguet S, Tarr G, Gauvreau CL, Mishra S, Jha P, Liu L, et al. Distributional benefits of tobacco tax and smoke-free workplaces in China: A modeling study. *J Glob Health*. 2017;**7**(2):207101. [PubMed ID: 29188029]. [PubMed Central ID: PMC5681709]. <https://doi.org/10.7189/jogh.07.020701>.
- James EK, Saxena A, Franco Restrepo C, Llorente B, Vecino-Ortiz AI, Villar Uribe M, et al. Distributional health and financial benefits of increased tobacco taxes in Colombia: results from a modelling study. *Tob Control*. 2019;**28**(4):374–80. [PubMed ID: 30093415]. <https://doi.org/10.1136/tobaccocontrol-2018-054378>.
- Wu DC, Sheel V, Gupta P, Essue BM, Luong L, Jha P. Impact of cigarette tax increase on health and financing outcomes in four Indian states. *Gates Open Res*. 2020;**4**:49. [PubMed ID: 33089072]. [PubMed Central ID: PMC7548764]. <https://doi.org/10.12688/gatesopenres.13127.1>.
- Tamir O, Cohen-Yogev T, Furman-Assaf S, Endevelt R. Taxation of sugar sweetened beverages and unhealthy foods: a qualitative study of key opinion leaders' views. *Isr J Health Policy Res*. 2018;**7**(1):43. [PubMed ID: 30064503]. [PubMed Central ID: PMC6069556]. <https://doi.org/10.1186/s13584-018-0240-1>.
- Ross H, Tesche J, Vellios N. Undermining government tax policies: Common legal strategies employed by the tobacco industry in response to tobacco tax increases. *Prev Med*. 2017;**105**(Suppl):S19–22. [PubMed ID: 28625418]. [PubMed Central ID: PMC5747349]. <https://doi.org/10.1016/j.ypmed.2017.06.012>.

28. Andreyeva T, Long MW, Brownell KD. The impact of food prices on consumption: a systematic review of research on the price elasticity of demand for food. *Am J Public Health.* 2010;**100**(2):216–22. [PubMed ID: [20019319](#)]. [PubMed Central ID: [PMC2804646](#)]. <https://doi.org/10.2105/AJPH.2008.151415>.
29. Green R, Cornelsen L, Dangour AD, Turner R, Shankar B, Mazzocchi M, et al. The effect of rising food prices on food consumption: systematic review with meta-regression. *BMJ.* 2013;**346**:f3703. [PubMed ID: [23775799](#)]. [PubMed Central ID: [PMC3685509](#)]. <https://doi.org/10.1136/bmj.f3703>.
30. World Health Organization. *Fiscal policies for diet and prevention of noncommunicable diseases: technical meeting report, 5-6 May 2015, Geneva, Switzerland.* Geneva, Switzerland: World Health Organization; 2016. 36 p p.
31. Immurana M, Boachie MK, Iddrisu AA. The effects of tobacco taxation and pricing on the prevalence of smoking in Africa. *Glob Health Res Policy.* 2021;**6**(1):14. [PubMed ID: [33926580](#)]. [PubMed Central ID: [PMC8082915](#)]. <https://doi.org/10.1186/s41256-021-00197-0>.
32. Krishnamoorthy Y, Ganesh K, Sakthivel M. Fat taxation in India: A critical appraisal of need, public health impact, and challenges in nationwide implementation. *Health Promot Perspect.* 2020;**10**(1):8–12. [PubMed ID: [32104652](#)]. [PubMed Central ID: [PMC7036206](#)]. <https://doi.org/10.15171/hpp.2020.04>.