

The Role of Taxation Measures in the Management of Harmful Products, Services, and Practices: A Qualitative Study

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Abstract

Background and Aim:

Levying a tax on harmful products, services, and practices can impact consumer choices, effectively preventing diseases and reducing healthcare costs by reducing demand, changing consumption patterns, and encouraging healthier lifestyles. The goal of this study was to investigate the role of taxation as a powerful financial tool in the management of harmful products, services, and practices with the purpose of maintaining and improving public health and preserving the financial sustainability of the healthcare system.

Materials and Methods

The present study is a qualitative research that was conducted in 2020-21. In order to collect information, semi-structured interviews with open-ended questions were used. Using purposive and snowball sampling methods, 38 managers, policymakers, economists and key experts, were interviewed. Data were analyzed using content analysis method and the transcribed interviews were further imported into MAXQDA for classification and relevant codes were extracted.

Findings:

In this study, 6 main themes and 19 subthemes were labeled. The main themes accordingly included 1- Objectives, effects, and requirements of the taxation of harmful products, services, and practices 2- Definition, instances, and grading of harmful products, services, and practices 3- Challenges and problems in controlling harmful products, services, and practices 4- Controlling harmful products, services, and practices 5- Traffic violations and accidents and social harms 6- Tax revenue use and the share of healthcare.

Discussion and Conclusion:

Harmful products, services, and practices tend to have major health and financial implications for individuals, families and society. In order to improve public health, the demand for these products and services can be controlled through taxation measures so as to push consumers toward less harmful alternatives.

Introduction

Taxation is also an important source of revenue for governments, and a high share of tax revenue in the government budget can contribute to economic health [1]. The fiscal instruments such as taxes or subsidies, can to promote healthy behavior. Interest in the use of such instruments to promote healthier

behavior, has increased among academics and policymakers [2], and its use has also been recommended by the World Health Organization (WHO) [3, 4]. Increasing the price via a tax is to make the unhealthy option less affordable and less economically attractive, and hence to reduce the consuming these products [5]. Governments can use fiscal tools to regulate the prices and reduce consumption of harmful goods [6].

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 and services, the shift in consumption patterns, and the promotion of healthy lifestyles, which in turn reduce the health implications of these products and services and the ensuing care and treatment costs [7]. Taxes on harmful products can reduce the negative effects associated with high consumption of these products, by raising prices [8, 9]. In addition, the health effects may be visible for years [10].

Studies show 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 [11]. Increasing taxes on tobacco, especially cigarettes, can significantly reduce the adverse effects of consumption of these products and thus prevent the waste of the society's financial resources [12, 13]. Taxes on harmful sugars can also prevent many diseases, particularly in childhood [14]. Taxes are a powerful tool for achieving the goal of reducing the consumption of unhealthy foods and beverages [15]. These taxes have potential in health systems, as a public health tool and a source of financial stability [16]. It must be ensured that fiscal policies especially taxes and subsidies, increase access to health products and reduce access to unhealthy ones [17].

On the other hand, providing sustainable financial resources is one of the most important problems in the health system and because of financial constraints, this challenge has increased [18]. Tax revenues could be a good source of funding for governments and cover health expenditures. [19, 20]. Revenues from these taxes are very attractiveness for managers and policymakers, and these sources of income can be used for sustainable financing of the health system [21].

The primary goal of the health tax should be clear and the tax should be framed accordingly. In order to reduce the consumption of unhealthy products, the tax should be enough to increase the price of products by 20% or more [22]. Although the primary objective of health taxes is financial revenues, but due to the social and economic harms, and diseases associated with unhealthy products, the tendency to policy and research in the ability of these taxes to increase manufacturing and distribution costs as well as reduce consumption of unhealthy products has increased, which this issue has a significant effect on the modification of consumption patterns [23].

Pricing tools are one of the most important policy and management tools to track and control health risk factors [24]. Fiscal policies especially taxation, can both have significant health benefits and be used to increase public health budgets. These policies reduce health expenditures, by modifying better lifestyles and encouraging healthy behaviors [25]. However, policies aimed at reducing consumption through taxes and increasing prices, may cause financial problems for low-income people [6]. In addition to the direct

effects of taxes on harmful products, services, and practices especially health promotion, the use of these policies alongside other public health strategies increase their impact and the revenue generated can be used for other health-related measures [26].

Considering that harmful products, services, and practices are among the major causes of morbidity and mortality around the world, including Iran, imposing massive financial and non-financial costs directly and indirectly on people and governments, therefore, dealing with them, especially reducing the consumption of harmful products and reducing the likelihood of taking risky measures, should be considered seriously. This study aimed to investigate the role of taxation as a powerful economic tool in the management of harmful products, services, and practices in pursuit of two primary goal and function of the healthcare system, i.e. maintaining and improving public health and preserving the financial sustainability of the system.

Materials And Methods

Study design

This study was a qualitative research that has been done using content analysis method in 2020-21. The data in the present study were collected through interviews with managers and experts related to the research topic. The study was performed with a qualitative approach so as to gain a comprehensive, deep, and rich information of the subject.

Participants and setting

The statistical population of this study is consisted of managers, policymakers, deputies and key experts, from Iran National Tax Administration (INTA), the Ministry of Health and Medical Education, the Ministry of Economic Affairs and Finance, the Plan and Budget Organization, Department of Environment, members of the parliament (MPs), as well as professors and key experts in number of reputable universities in Iran. The inclusion criteria in this study included at least a master's degree or a medical doctorate (MD), having an executive or academic background in the field of economics and health, as well as showing their willingness to attend the interviews. In total, 38 managers, deputies, policymakers, and key experts were interviewed upon obtaining their consent. Both purposeful and snowball sampling method with maximum variation were also employed. The interviews also continued until the collected data reached saturation.

Data collection

Using the existing rules and guidelines, research background, along with expert opinions, the initial interview questions were identified. In order 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, and the type and order of the questions were determined, as well as unintelligible questions were revised, and ultimately, the final interview questions were developed. The interviews were

conducted in a semi-structured manner with open-ended questions and by prior appointment over a period of nine months. Thus, after coordination, most of the interviews were conducted at the respondents' workplace and some were completed by phone calls as wished by them. The topics of the interview sessions were also recorded with the permission of the interviewees and then transcribed verbatim. The interviews were also transcribed after the end of each session in order to become aware of the data saturation time and increase their accuracy.

Trustworthiness of data

The robustness, accuracy and precision of the data were further determined based on the four criteria of credibility, transferability, dependability, and confirmability [27]. To ensure the credibility of the data, member checks, peer feedback, allocation of enough time to data collection, and researchers' long-term involvement were used. The transferability of the data was also provided through interviews with different informants from various departments and a rich description of the data. To ensure the dependability criterion, the study process was submitted to quality consultants and they approved the study results after some reviews. In order to meet confirmability, indicating the stability of the data, along with observing the researchers' impartiality, external reviews were utilized in the form of supplementary comments by colleagues and review of Manuscripts. The interviews, coding, and the extraction of the main themes and subthemes were fulfilled by two members of the research team who did not have any conflict of interest with the research subject.

Data analysis

In order to analyze the data, 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 the number of interviewees to add or subtract some issues, as needed. Finally, the transcribed interviews were entered into MAXQDA (ver. 12) for classification and the initial codes were extracted. Then, the final codes and themes were obtained with the cooperation and comments of the interviewees and members of the research team, and at last, the codes were grouped into main themes and subthemes. Prior to the interviews, the research objectives along with the arrangements required to maintain the confidentiality of the data were presented orally to all interviewees, and written consent was acquired.

Ethical consideration

Prior to the interviews, the research objectives along with the arrangements required to maintain the confidentiality of the data were presented orally to all interviewees, and written consent was acquired. Study participants were reassured that interview data would only be used for this study and would not be shared with others.

Results

According to the transcribed interviews and review of relevant texts, 6 main themes and 19 subthemes were identified in this study. Most of the interviewees, were from the Iran National Tax Administration, Tehran University of Medical Sciences and the Ministry of Health. The information about place of employment and work experience of the interviewees, and demographic information, are illustrated in Tables 1-2.

Table 1: Place of employment and work experience of the interviewees

Interviewee No	place of the employment	Work experience (year)
1	Tehran University of Medical Sciences	20
2	Tehran University of Medical Sciences	40
3	Tehran University of Medical Sciences	20
4	Tehran University of Medical Sciences	6
5	Tehran University of Medical Sciences	6
6	Tehran University of Medical Sciences	46
7	Tehran University of Medical Sciences	16
8	Iran University of Medical Sciences	35
9	Shahid Beheshti University of Medical Sciences	12
10	University of Tehran	21
11	University of Tehran	12
12	Allameh Tabataba'i University	20
13	Plan and Budget Organization	22
14	Plan and Budget Organization	16
15	Ministry of Health and Medical Education	21
16	Ministry of Health and Medical Education	26
17	Ministry of Health and Medical Education	13
18	Ministry of Health and Medical Education	6
19	Ministry of Health and Medical Education	12
20	Ministry of Health and Medical Education	23
21	Ministry of Health and Medical Education	22
22	Islamic Parliament of Iran	31
23	Islamic Parliament of Iran	35
24	Islamic Parliament of Iran	15
25	Ministry of Economic Affairs and Finance	20
26	Department of Environment	27
27	Iran National Tax Administration	31
28	Iran National Tax Administration	24

29	Iran National Tax Administration	13
30	Iran National Tax Administration	21
31	Iran National Tax Administration	27
32	Iran National Tax Administration	33
33	Iran National Tax Administration	26
34	Iran National Tax Administration	32
35	Iran National Tax Administration	25
36	Iran National Tax Administration	38
37	Iran National Tax Administration	25
38	Iran National Tax Administration	16

Table 2: Demographic information of the participants

Variable	Sub-variable	Count	Percentage
Gender	Male	36	94.74
	Female	2	5.26
	Total	38	100
Age (Year)	30-40	9	23.68
	41-50	10	26.32
	51-60	15	39.47
	Above 60	4	10.53
	Total	38	100
Work experience (Year)	5-10	3	7.90
	11-20	13	34.21
	21-30	13	34.21
	Above 30	9	23.68
	Total	38	100
Level of education	Masters	13	34.21
	Medical	5	13.16
	PhD	20	52.63
	Total	38	100

1- Objectives, effects, and requirements of the taxation of harmful products, services, and practices

Objectives of taxation: Before levying taxes on harmful products, services, and practices, first, the exact goals of this taxation must be determined. People interviewed in this study believed that the two main goals of this taxation should be to promote public health and ensure the financial sustainability of the healthcare system. Other mentioned goals included improving production, correcting behavioral habits, and reducing consumption.

“Taxing harmful goods has two purposes: One is that rising taxes and prices of such products will reduce their consumption rates, and this will promote public health, next, the tax received is a sustainable source of funding for the health system.” (Interviewee no. 20)

Effects of taxation: The positive effects of taxing harmful products include reduced access to these products, reduced demand for these products, revenue generation, change in consumption patterns, change in production lines, and increased production of less harmful alternatives. However, these taxes may also have some negative consequences.

“Taxing such products has two benefits. Firstly, it makes them more expensive, which means some people won’t be able to afford them or not as much. Secondly, it brings in some revenue, which can be diverted to healthcare” (Interviewee no. 17)

“With a tax hike, for example, on cigarettes, some families, especially those that are poorer, will have to cut their main expenses to afford cigarettes”. (Interviewee no. 7)

Requirements of taxation: According to most interviewees, the most important requirements for this taxation are the determination of the exact tax rates with attention to anticipated effects and different aspects of the issue, culture building and raising public awareness, and attention to the effects of price changes on different income groups.

“We should be very careful in putting taxes on harmful products and consider everything before changing the rates. The important thing is to carefully choose the exact rate and for how long and for which groups it will apply” (Interviewee no. 6)

2- Definition, instances, and grading of harmful products, services, and practices

Definition and instances: In order to better control harmful products, services, and practices through taxation for health promotion and financial sustainability purposes, these products, services, and practices need to be properly defined with instances.

“Our definition of harmful products must be further expanded. We need to increase the tax base for such goods, not just increase the tax rates. There are so many products that have health impacts but are not taxed” (Interviewee no. 18)

Elasticity: One of the most important issues that need to be considered when discussing taxation is the elasticity of demand for products and services. For products with low price elasticity, demands tend to not change significantly with price changes, especially in the long run. Thus, for these products, price tools need to be utilized alongside other strategies.

“When talking about taxing harmful products, you should consider which groups of people use these products the most, the poor or the rich. Then, you should determine the elasticity or the reaction to prices”. (Interviewee no. 5)

“Once we know the elasticity of different products, we can very well predict the effectiveness of taxes in reducing their consumption and changing people’s consumption habits, and then formulate more effective tax and pricing policies”. (Interviewee no. 25)

Identification and grading of harmful products, services, and practices: Since different harmful products and practices will have different levels of health implications, they must be graded based on the type and severity of their effects. The amount of tax levied on each type of product or service should be proportional to the severity of its effects.

“Harmful products must be classified. For the products that are extremely harmful, production and distribution should be outright banned. For those that are harmful but are too commonly used to be banned, we must take less coercive actions; for example, use the tax system to eliminate the market rather than creating a permanent revenue source. For those products that have proven adverse health effects, but their effects are more long term than immediate, taxes should be collected to reduce consumption”. (Interviewee no. 13)

3- Challenges and problems in controlling harmful products, services, and practices

Poor decision making, planning, and execution: According to the interviewees, the most important challenges in planning and implementation of a tax policy for controlling harmful products, services, and practices include the complexity of the tax system, the non-deterrence of taxes, the relatively poor coordination and cooperation of the country’s legislative and executive bodies, the multitude of government bodies in charge of dealing with the issue, the excessive focus on certain harmful products such as tobacco and carbonated beverages and neglect of other harmful products, inexact and outdated tax codes, poor taxing structures, the lack of enough information about harmful products and services, poor commitment to deal with the issue, inadequate monitoring and supervision, conflict of interests, and the lack of specific job descriptions in government bodies for controlling harmful products, services, and practices.

“The excessive consumption of harmful goods and the increase in related diseases and their injuries are in part 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 no. 8)

Production-related problems: The interviewees stated that imposing a tax on products, which will increase their prices, will cause problems for manufacturers.

“When we increase taxes, the increased cost of the product will reduce the demand, which will damage the manufacturer. Naturally, manufacturers have to lower their prices to prevent sales drop”. (Interviewee no. 15)

Smuggling and poor supervision: While the impact of a tax increase on the smuggling of taxed products into the country needs to be considered, there is not much evidence in relation to this impact. The interviewees believed that poor supervision will be a serious problem in managing the effect of taxes on harmful products.

“Experience and scientific evidence show that smuggling is not usually caused by tax policies or rising prices of domestically produced products. The source of the illegal trade of harmful products 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 no. 24)

Increased consumption of harmful products: Taxing some harmful products or raising their prices may lead to the increased consumption of other harmful products or the increased incidence of certain risky behaviors due to reduced access to the original products.

“After taxing harmful products, the market will be full of low-quality alternatives and counterfeits, which could be even cheaper and more damaging than the originals”. (Interviewee no. 2)

Conflict of interests: Since some individuals, organizations, and businesses greatly benefit from the production, distribution, and trade of harmful products, conflict of interests will be a major obstacle to the imposition of taxes on many of these products.

“Rising taxes on harmful products may hurt the economic interests of some people. So they will do everything they can to prevent it”. (Interviewee no. 27)

4- Controlling harmful products, services, and practices

Imposing taxes, duties, and price hikes: According to most people interviewed in this study, one of the best ways to control harmful products and practices is to levy higher taxes and duties and raise their prices. Of course, the tax increase must be purposeful and proceed in stages and can be reduced or reversed upon reaching the envisioned objectives in relation to products or production processes.

“For the consumption of harmful goods, I have to take risk for them, that is, to make them harder to achieve, I will make them so expensive that, firstly, people do not tend to buy them, and secondly, if they consume them and the disease is created, I will compensate the damage from the consumption tax.” (Interviewee no. 1)

“There are so many harmful products and their share in the consumer goods should be reduced. We have to tax them. These taxes should be increased to the point that people can no longer afford them”. (Interviewee no. 30)

Providing alternatives: According to a number of interviewees, imposing high taxes on harmful products will boost the production of healthier or less harmful products. 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 products can boost industries that make healthy products, which will also boost jobs in that sector”. (Interviewee no. 24)

Attention to all determinants of supply and demand: Demand and supply of harmful products can be a function of many factors. Thus, before adopting tax and non-tax measures for controlling them, the reasons why these products are consumed should be determined. In addition to being a function of price, demand for harmful products and services is also a function of beliefs, habits, advertising, and product quality.

“For our tax measures to be effective, we need to influence consumer choices and decisions. Unfortunately, not much is being done on this issue. If we work on the pricing and quality of our products or their appearance, then demand and consumption will improve”. (Interviewee no. 8)

5- Traffic violations and accidents and social harms

Fining and taxation: Traffic accidents are a major cause of injury, disability, death, and rising healthcare costs in Iran. Since drivers, automakers, and government bodies such as municipality, police, and highway administration all play a role in the incidence and severity of traffic accidents, the contribution of each of these entities to damages should be determined so that appropriate compensation can be claimed. Social harms and behavioral offenses that adversely affect the health of others can also be fined. However, to do so, first, detailed studies should be conducted on the subject in order to fully explore its legal and executive implications.

“In my opinion, it is not only appropriate but necessary to put a tax on driving violations and social deviances, those behaviors that have external consequences. If someone has caused an accident or violated the law and is guilty and his actions have been preventable, he must pay a fine because his behavior has harmed the society and others”. (Interviewee no. 6)

Deterrence of fines and taxes: Before imposing fines, fees, or taxes on traffic violations and social deviances that threaten the health of others, the deterring effects of these measures should be carefully considered. For this purpose, it is necessary to consider different aspects and conditions of the violations and examine the effects of fines and taxes at different time intervals.

“You can put taxes on traffic violations and social deviances, but it is important to determine how much deterrence they create; whether you have increased the cost of the violation. This fine should prevent the

person from repeating the violation or at least reduce the probability”. (Interviewee no. 31)

Requirements and conditions for fining and taxation: The conditions and requirements for levying fines and fees on traffic violations and accidents and social deviances include access to enough data about the violations and their root causes, a clear and specific vision of the purpose of fines, an exact assessment of legislative measures for implementing fines and taxes, expert meetings with the participation of relevant individuals and organizations, a good assessment of the effects and consequences of the implementation of such fines and taxes, using the experiences of other countries in this area, and considering the social, cultural and economic conditions of the country.

“In such cases, we need to discuss two issues. One is that we want to reduce deviances. The other is how such a tax can even be collected. We need systems with enough sensitivity and intelligence to detect them”. (Interviewee no. 15)

6- Tax revenue use and the share of healthcare

Use of revenues from the taxation of harmful products, services, and practices: According to most interviewees, the bulk of revenue from the taxation of harmful products and practices should be allocated to the healthcare sector. Of course, this does not necessarily mean that the revenue should be given to the Ministry of Health, as other government agencies that contribute to public health can also use the revenues for health promotion purposes. The most important areas where these tax revenues can be utilized include promoting preventive health, improving access to services, improving treatment coverage, modernizing and improving production processes, and boosting high-quality healthy alternatives.

“Taxes on harmful goods can be used to help industries produce better and healthier goods, or to acquire healthier raw materials at better prices. These taxes can also be used to treat related diseases. For example, you can use the duties and taxes on harmful products to create a fund”. (Interviewee no. 23)

Use of revenues from the taxation of advertising harmful products and services: Some of the interviewees mentioned the possibility of levying taxes on the advertisement of harmful products and services. The revenue gained from this tax can be used for culture building, improving people’s eating habits, and other such initiatives. One may also impose higher taxes on certain products and also certain advertising processes that are deemed more harmful.

“It is important to receive taxes and duties from advertising of harmful goods, were used to improve the quality of the products or to pay for public health”. (Interviewee no. 9)

Discussion

Harmful products, services, and practices tend to have major health and financial implications for individuals, families, and society. The demand for these products and services 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, Six main themes were established, including 1- Objectives, effects, and requirements of the taxation of harmful products, services, and practices 2- Definition, instances, and grading of harmful products, services, and practices 3- Challenges and problems in controlling harmful products, services, and practices 4- Controlling harmful products, services, and practices 5- Traffic violations and accidents and social harms 6- Tax revenue use and the share of healthcare.

Taxes on harmful products, services, and practices should be a part of a multipronged strategy and action, rather than a sole measure for preventing disease or solving problem. The results of the present study show, tax measures influence on behavioral and social patterns.

Sin taxes is a good way to increase revenue and improve the fiscal space (FS) [28]. According to Partyka et al. (2019), sin tax could change consumer behavior and promote public health by modifying prices [29]. Sin taxes also can reduce the consumption of unhealthy goods and generate more revenue [30]. Evidence has shown that the application of these taxes can have a significant effect on consumption patterns and population welfare [31]. The findings of this study also show that taxes on unhealthy products, services and practices lead to behavior change, higher income and improved public health.

The higher taxes aimed at increasing the cost of manufacturing, distributing, retailing or reducing consumption on unhealthy products [32]. Studies show that taxes have a greater effect in reducing the consumption of some commodities and can encourage industries to reduce prices in order to maintain consumption levels, as well as improve processes and produce quality products [22, 33]. In the present study, the findings showed that taxing harmful products, services, and practices to increase their prices changes the behavior of consumers and even manufacturers. On the one hand, it reduces the demand for these products and on the other hand, it encourages or forces manufacturers to modify their production lines and improve the quality of their products.

The taxes on harmful goods such as cigarettes, sugary or high-fat substances, carbonated beverages and alcohol, according to our research results, often has positive effects. By imposing taxes and increasing the prices of harmful products and thus reducing their consumption, health is less threatened. Many countries have either implemented plans to introduce taxes on SSBs or on foods high in salt, fat and sugar [34-40]. These taxes have reduced purchasing and consumption of these drinks (41-48). A 20% tax on the sale of SSBs have significant impact on overweight, obesity and reduce caries [49-51]. A 2016 study in South Africa had similarly demonstrated that taxation on sugary drinks, could prevent the loss of 72,000 deaths and 550,000 years of healthy living, as well as reduce health expenses by \$5 billion [52]. The results of our study suggest that one of the most important effects of taxing harmful products will be the reduced consumption of sugary drinks, which will reduce the incidence of diseases associated with these products and the ensuing medical expenses.

A common criticism of levying taxes on food products is that it will have a greater impact on low-income households, which have to spend more of their income on food, than on high-income households. However, the impact of taxation on food costs and its health implications in different income groups is

yet to be measured in detail [53]. The results of this study also show that imposing taxes on those harmful products that are commonly used by people will be problematic for many families, even forcing them to cut some of their main living expenses so that they can afford those products.

Study in the United States (2008) found that higher taxes had reduced smoking, especially among the less educated and low-income families [54]. According to another study in Vietnam (2018), increasing taxes on tobacco, significantly diminished the adverse effects of consuming these substances and prevents the loss of \$57 billion of the resources [12]. There is robust evidence that tobacco taxation policies improve health, particularly among the poor [55-60]. The results of our study also indicate the significant effectiveness of levying taxes on tobacco products, particularly cigarettes, in reducing consumption among all income groups and reducing the associated diseases and costs.

In many industries where a tax has been imposed on harmful products, with the subsequent fall in demand because of higher prices, manufactures have modified their production processes and methods to produce less harmful versions of the same products in order to avoid the duties and taxes. In many cases, these developments have culminated in a rising demand for these products.

The taxation of harmful products and services has certain requirements and conditions, which include determining the exact tax rate according to the anticipated effects and conditions, culture building and raising public awareness, and attention to the effects of price changes on different income groups.

The examples of unhealthy products must be identified according to the realities of society. In taxation, households' financial capability and the effects of taxes on consumption in different periods, as well as the elasticity of goods should be taken into account. Taxes generally raise prices and reduce demand. According to studies, the rate of the reduction of demand and who is most affected by prices, depend on consumers' price elasticity of demand [61]. On the other hand, demand for most foods is not elastic, and industries and retailers can shift large part of the price increases to consumers without significantly reducing consumption [62]. Because of inelasticity of demand, experts believe that price increases should be significant in order to generate meaningful behavioral changes [63].

WHO recommended that indirect tax rate of cigarettes, 70% of retail prices [64] and the tax rate of SSB at least 20%, be considered [65]. In order to improve the level of health, policymakers consider labeling on goods as a means to change consumer behavior [66, 67]. This study also showed that in addition to pricing tools, guiding consumers to buy healthier products is a good policy for preventing disease and promoting health.

Such taxation policies will also face many challenges and problems, the most important of which are poor decision making, planning, and execution, production-related problems, smuggling and poor supervision, increased consumption of harmful products, and conflict of interests. These problems need to be studied in partnership with relevant government agencies, especially the ministries of Health, Industry and Mine, Economy, and Agriculture, in order to determine the best approach to address and solve them. Another important challenge is that some individuals and groups will oppose raising taxes on

harmful products for various reasons. For example, price adjustments with the purpose of promoting healthy diets may be opposed by many stakeholders. However, in recent years, many countries have adopted pricing policies aimed at influencing the type and amount of food people purchase and use in their diet [68]. In the study by Tamir et al., it was stated that these taxes would mostly affect people with low socio-economic backgrounds. Barriers related to these taxes include: opposition of various sectors, technical and bureaucratic obstacles to tax implementation, problems in defining taxes on products, and opposition of the treasury to earmark tax revenue for health education [69].

Price increases are often impose a larger financial burden for low-income households than high-income households. However, due to rising prices and declining consumption of unhealthy goods, the health effects on low-income consumers are significant. [6]. According to the results of the present study, tax policies and price increases usually affect high-income households more than low-income households, but high-income ones can afford increasing costs. Also, tax revenues from increasing prices, can reduce the tax burden on low-income households.

To improve the effectiveness of tax measures in controlling harmful products and services, on the one hand, more work needs to be done on providing high-quality healthier alternatives, and on the other hand, serious attention should be paid to all factors that may affect supply and demand, especially prices, people's purchase power, beliefs, habits, and culture, advertisements, and the quality of products. There is scientific evidence suggesting that the environment in which people choose their diet and their ability to afford healthy foods have a huge impact on their diet [70]. Also, increasing the taxes on harmful products, services, and practices should encourage the people to use healthier options such as fruits and vegetables especially among children and young people. Hence, in order to promote consumption patterns, tax on harmful goods should be applied along with subsidy on healthy goods.

While the scope of the taxation of harmful products and services can be expanded to include traffic incidents and social deviances, this will require a great amount of information about these violations and their root causes and a clear and specific vision of the purpose of this tax. Examples and the way taxes and tolls or fines are imposed on traffic violations as well as behavioral violence and social anomalies must be properly identified. It should be considered the deterrence of these fines and their complications, and their effects should be properly identified and analyzed.

Another benefit associated with the taxation is the generation of revenue. It is important that the revenues generated from the taxation of harmful products and practices are spent in the right places. The bulk of this revenue should go to agencies and organizations that work in the area of public health.

Since the financial resources generated from such sources will be limited, the allocation of these resources in the healthcare sector should be done with great care and attention to detail and with an emphasis on improving the financial sustainability of the healthcare system. This sustainability will make sure that services remain available to all applicants without uncertainty and interruption [71]. Allocating tax revenues should be considered, especially for health promotion activities, treatment and prevention of diseases, education of people, and subsidies of healthy food [69]. Tax revenues can be

used for different health plans and programs to prevent disease, to improve nutrition and encourage physical activities [72]. The results of this study also suggest that the tax revenues allocated to the healthcare sector should be spent carefully and with proper supervision. These revenues should be mainly used in the area of hygiene and preventive health, but can also be used for culture building, advertising the benefits of healthy products over harmful products in the media, educating people of all ages about these benefits, supporting industries that show initiative or invest in producing healthier products, providing financial supports to industries that seek to modify their production lines and practices or transition to better raw materials in order to produce less harmful products, and promoting public exercise.

Allocating subsidies for healthy food, improving Public health awareness, accessibility to healthy foods, creating a health-promoting environment and proper nutrition in schools and workplaces, are some of the most important recommendations to better dealing with goods that are harmful to health. [73]. Taxes on health related products can modify habits and reduce disease. Taxes on these products, should be both carefully designed and closely evaluated to help promote population health. Taxation alone will not solve the problems of the health system, but these financial instruments play an important role in changing and modifying both industry and consumer behavior. Taxes on harmful Products, Services, and Practices should be accompanied by effective public health measures and health awareness activities. Taxes on health related products and practices will have a significant impact on health promotion and will help financing health sector.

Recommendations: The accurate classification and grading of harmful goods and practices, the reasonable determination of tax rates, Adequate attention to all goods and measures of harmful to health, considering the impact of taxes on consumption at different periods, attention to the elasticity of goods and services, paying attention to the deterrence of laws and their enforcement guarantee, proper and purposeful planning for the correct use of tax resources, transparency at the expense of tax resources, improving tax infrastructure and processes, the close monitoring and follow-up of consumption resources, Cooperation and coordination of relevant organizations in the formulation and implementation of health-related tax laws, resolving conflicts of interest, building a culture, and raising public awareness, adequate access to economic information and related statistics, investment in healthy industries and equipment modernization, dealing seriously with violations and increasing their fines, simultaneous implementation of corrective and incentive policies and strong and persistent fight against tax evasion were thus among the most important suggestions regarding taxes on harmful products, services, and practices.

Strengths and limitations: The strength of this study was mainly interviews with policy makers, managers and experts from different organizations and ministries related to the subject and professors of important universities. The study of harmful products, services, and practices from various aspects, as well as, the effects and relationship of taxes on these goods and measures with the goals and functions of the healthcare sector, were other strengths of this study. The most important limitations of the present study, were the concurrence of the study with the coronavirus epidemic, especially the limitations for face-to-

face interviews, the extent of the subject and possibly the inadequate survey of some aspects, as well as, the lack of sufficient studies on various aspects of harmful products, services, and practices.

Conclusion

Taxation can serve as a policy and management tool for influencing people's ability and motivation to purchase harmful products and services and as a deterrent against certain harmful practices and activities. Despite the existing limitations and problems, taxation of harmful products, services, and practices within the framework of the specific rules and programs, must be seriously pursued. Many strategies to improve public health require proper policy-making, legislation, planning, implementation, and monitoring, especially in the field of financing, prioritization reform approaches, and cooperation and coordination on health issues, and taxes on harmful products, services, and practices could be the most important requirements and facilitators in this regard.

Abbreviations

INTA: Iran National Tax Administration, MD: medical doctorate, MPs: members of the parliament, WHO: World Health Organization, FS: fiscal space.

Declarations

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Authors' contributions

HD and SE conceptualized the work. Data curation, coding and formal analysis were done by MK. Project administration and its supervision were done by HD, and MK was a major contributor in writing the manuscript. All authors read and approved the final manuscript.

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Availability of data and materials

Since the present study is a qualitative study, based on the statements of the participants in section of the informed consent form, the participants only allowed the researchers to publish the findings as a whole. Therefore, we do not have permission to provide 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 email to the authors.

Ethics approval and consent to participate

This article approved by Institutional Research Ethics Committee School of Public Health & Allied Medical Sciences- Tehran University of Medical Sciences, Tehran, Iran, with the ethics code: IR.TUMS.SPH.REC.1398.332. This study and all relevant methods, were carried out accordance with the guidelines and regulations of the Declaration of Helsinki. Before beginning the interviews, each participant received the necessary information by principal investigator about the study and interview began after obtaining written informed consent.

Consent for publication

Not applicable.

Competing interests

The authors declare that they have no competing interests.

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