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Article

Stakeholder views on taxation of sugar-sweetened beverages and its adoption in the Netherlands

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Summary

An increasing number of governments worldwide have introduced a tax on sugar-sweetened beverages (SSB) for public health. However, the adoption of such a policy is still debated in many other countries, such as in the Netherlands. We investigated Dutch stakeholder views on taxation of SSB and perceived barriers and facilitators to its adoption in the Netherlands. Semi-structured interviews were conducted in 2019 with 27 stakeholders from health and consumer organizations, health professional associations, trade associations, academia, advisory bodies, ministries and parliamentary parties. Data were analysed using a thematic content approach. The findings reveal that, between and within sectors, stakeholders expressed contradictory views on the effectiveness, appropriateness and (socio)economic effects of an SSB tax. Perceived barriers to the adoption of an SSB tax in the Netherlands included an unfavourable political context, limited advocacy for an SSB tax, a strong lobby against an SSB tax, perceived public opposition, administrative load and difficulties in defining SSB. Perceived facilitators to its adoption included an increasing prevalence of overweight, disappointing results from voluntary industry actions, a change of government, state budget deficits, a shift in public opinion, international recommendations and a solid legal basis. In conclusion, this study shows that several challenges remain to be overcome for the adoption of an SSB tax in the Netherlands. Similar research on stakeholder views in other countries may further inform SSB tax policy processes.

Key words: obesity, policy, sugar-sweetened beverages, tax, stakeholders

INTRODUCTION

Worldwide, the prevalence of obesity has nearly tripled since 1975 (WHO, 2020a). Based on the latest estimates in European Union (EU) countries, 30 – 70% of adults are overweight of which 10 – 30% are obese (WHO, 2020b). Overweight and obesity are related to an increased risk of developing non-communicable diseases including type 2 diabetes, cardiovascular diseases, musculoskeletal disorders and some types of cancer (WHO, 2020a). Among the many determinants of overweight and obesity, sugar-sweetened beverages (SSB) have received considerable attention as a target for prevention. SSB have been strongly and causally associated with obesity development and provide little to no nutritional value (Malik *et al.*, 2010, 2013; Hu, 2013; Woodward-Lopez *et al.*, 2011). Evidence for the causal association between consumption of SSB and weight gain is stronger than for other types of food or beverages (Woodward-Lopez *et al.*, 2011). Potential underlying mechanisms are their high levels of added sugar, low satiety and an incomplete compensation for liquid calories at subsequent meals (Malik *et al.*, 2010, 2013; Hu, 2013; Woodward-Lopez *et al.*, 2011). Furthermore, consumption of SSB has been related to dental caries (WHO, 2015a).

Although European regions report relatively low SSB consumption levels compared to the rest of the world, large variations exist between countries (European Commission, 2018). Western Europe reports the highest European SSB consumption levels, with Belgium and the Netherlands identified as 'the top SSB consumers' (European Commission, 2018). In the Netherlands, SSB consumption contributes to 23.6% of added sugar intake among both children and adults (RIVM, 2018).

An effective strategy to reduce purchases of SSB is taxation of SSB (Teng *et al.*, 2019). Therefore, the Commission on Ending Childhood Obesity of the World Health Organization (WHO) recommends national governments to tax SSB as a component of a comprehensive approach to address the obesogenic environment (WHO, 2016a). Taxation of products such as SSB is regarded as the most feasible tax on dietary products to implement (WHO, 2016a). An increasing number of governments worldwide have introduced a tax on SSB (WCRF, 2019). In Europe, SSB taxes have been introduced in Belgium, Finland, France, Hungary, Ireland, Latvia, Norway, Portugal, the UK and the region of Catalonia (Spain) for health purposes, revenue-raising purposes or both (WCRF, 2019). Yet, no such policy has been introduced in many other countries.

A country that has not (yet) introduced an SSB tax is the Netherlands. The Netherlands currently applies a value-added tax (VAT) rate of 9% to all food and beverages (Belastingdienst, 2020a). Additionally, a consumption tax of 8.83 eurocent per litre is applied to fruit and vegetable juices, soft drinks and mineral water, with no distinction between SSB and sugar-free beverages (e.g. water or non-caloric sweetened beverages) (Belastingdienst, 2020b). One Dutch parliamentary party adopted an SSB tax in its draft election programme for the Dutch parliamentary elections in 2017. However, because the majority of their party members voted against the tax, the tax proposal was withdrawn from the election programme during their election congress (Eykelenboom *et al.*, 2020). In 2018, the Dutch government agreed on a package of measures to reduce the prevalence of overweight and obesity among children and adults in collaboration with more than seventy public and private organizations in the 'National Prevention Agreement' (Rijksoverheid, 2018). In the concept version of this agreement, an exemption from the existing consumption tax on sugar-free beverages was proposed. However, no governmental interventions as a tax exemption for sugar-free beverages or an SSB tax were announced to reduce overweight and obesity in the final version of the National Prevention Agreement (Rijksoverheid, 2018).

The adoption of an SSB tax is a political process that takes place in a complex adaptive system (Penney *et al.*, 2019). The adoption is related to many different components of this system, including the interplay and influence of stakeholders from various sectors (e.g. politicians, food industry/retail, public health professionals) (Penney *et al.*, 2019; Signal, 1998), which indicates the need to understand different stakeholder views. Stakeholder views on taxation of SSB have been investigated in various studies. For example, Signal *et al.* (Signal *et al.*, 2018) investigated New Zealand stakeholder views on health-related food taxes and subsidies. Stakeholders largely agreed that an SSB tax was both feasible and acceptable in New Zealand. Moreover, Tamir *et al.* (Tamir *et al.*, 2018) investigated the views of Israeli stakeholders on taxation of SSB and unhealthy snacks. Although Israeli stakeholders agreed on the need for policies to stimulate healthy food choices, a tax was generally not acceptable to stakeholders from non-economic sectors as it was thought not to have a substantial effect on reducing consumption. In countries that have not (yet) introduced an SSB tax, such as the Netherlands, an investigation of stakeholder views leads to a greater understanding of why certain stakeholders are in favour and others against an SSB tax. Furthermore, it generates more insight into potential challenges and opportunities when governments would

consider the introduction of such a policy. Since stakeholder views on taxation of SSB may vary across countries because of different political, economic and sociocultural contexts, it is important to share context-specific research at the international level (WCRF, 2020; Thow *et al.*, 2018).

The aim of this study was to gain insight into the views of Dutch stakeholders from a diverse range of relevant sectors (i.e. health and consumer organizations, health professional associations, trade associations, academia, advisory bodies, ministries and parliamentary parties) on taxation of SSB and on barriers and facilitators that may influence its adoption in the Netherlands. We also collected stakeholder recommendations for the design of an SSB tax if introduced in the Dutch context and for alternative measures to reduce overweight and obesity. This research is part of the Policy Evaluation Network (Lakerveld *et al.*, 2020).

METHODS

Study design and participants

Semi-structured interviews were conducted in the Netherlands between March and May 2019. Purposive sampling combined with snowball sampling was used to recruit stakeholders from a diverse range of relevant sectors and professional backgrounds (e.g. academics in the field of obesity prevention, preventive dentistry, health economics, political science and tax law) (Table 1). To ensure all relevant stakeholders were invited, each participant was asked to identify stakeholders that were lacking from the initial list of stakeholders that was developed by the research team. The sample size was determined according to the principle of saturation: recruitment of further stakeholders continued until sufficient data had been collected 'to have gained an adequate understanding of the dimensions and properties of

Table 1: Recruitment of stakeholders

Sector	Stakeholders approached ($n = 46$)	Stakeholders declined ($n = 19$)	Stakeholders included ($n = 27$)
Parliamentary parties	10	No response ($n = 2$) No time ($n = 1$) No reason ($n = 4$)	Politicians who are member of the Dutch parliament ($n = 3$)
Ministries	8	No response ($n = 2$) Insufficient knowledge on taxation of SSB according to the stakeholder ($n = 1$) No reason ($n = 2$)	Policymakers from various ministries ($n = 3$)
Advisory bodies	4	No response ($n = 1$) Insufficient knowledge on taxation of SSB according to the stakeholder ($n = 1$)	Representatives of a governmental, non-profit advisory body ($n = 2$)
Academia	10	No time ($n = 1$)	Academics in the field of obesity prevention, nutrition and health, preventive dentistry, behavioural science, health economics, tax law, political science, medical ethics or social epidemiology ($n = 9$)
Trade associations	5	No response ($n = 1$)	Representatives of trade associations for food and beverages manufacturers, hospitality businesses or the catering industry ($n = 4$)
Health professional associations	3	NA	Representatives of non-governmental, non-profit professional associations of physicians or dentists ($n = 3$)
Health and consumer organizations	6	No response ($n = 2$) Insufficient knowledge on taxation of SSB according to the stakeholder ($n = 1$)	Representatives of governmental or non-governmental, non-profit consumer organizations and health organizations in the field of nutrition and health promotion ($n = 3$)

the concepts and themes that have emerged' and no new information was emerging from the interviews (Watling and Lingard, 2012). Stakeholders were contacted by e-mail or phone. A total of 46 stakeholders were invited to participate, of whom eleven declined and eight did not reply to our initial e-mail, reminder e-mails, nor our calls (see Table 1, including reasons for declining). In total, 25 semi-structured interviews were conducted (see Table 1). The study included 27 participants, as one interview was conducted with two participants that represented two trade associations and one interview was conducted with two participants that represented one advisory body, both at the request of the participants. The study was conducted according to the ethical standards declared in the Declaration of Helsinki. In accordance with the Dutch Medical Research Involving Human Subjects Act, approval of the study by the Medical Ethics Committee was not required. Written informed consent was obtained from all participants before each interview.

Data collection

Interviews were conducted face-to-face by two researchers trained in qualitative research. M.E. conducted interviews with stakeholders from academia ($n = 9$), the advisory body ($n = 1$), trade associations ($n = 3$), health professional associations ($n = 3$) and health and consumer organizations ($n = 3$). S.D. conducted interviews with stakeholders from parliamentary parties ($n = 3$), ministries ($n = 3$) and trade associations ($n = 1$). The interviews lasted 25–90 min and were audio-recorded. Before the start of each interview, participants provided verbal consent for audio-recording of the interview. A semi-structured interview guide was developed by the research team using the available literature on stakeholder views on taxation of SSB (Eykelenboom *et al.*, 2019; Signal *et al.*, 2018; Tamir *et al.*, 2018) (see Supplementary Table 1 for topics and prompts). An SSB tax was defined as a tax with a minimum tax rate of 20% on regular soft drinks, fruit juices with added sugar, sports drinks, energy drinks and flavoured water with added sugar. Broad questions investigated stakeholder views on taxation of SSB in general and on barriers and facilitators to its adoption more specifically. Stakeholders in favour of an SSB tax were asked for their recommendations for the design of an SSB tax if introduced in the Dutch context. Stakeholders against the tax were asked for recommendations for alternative measures to reduce overweight and obesity in the Netherlands. Stakeholders who were neither for or against the tax provided input on both questions. The interview guide was pilot tested on a health organization employee, who after the interview provided feedback on the interview guide. Based on the feedback, no adjustments were required. Data were collected and analysed concurrently, allowing the research team to explore issues that proved to be important in earlier interviews further in subsequent interviews.

Data analysis

All interviews were transcribed verbatim. To enhance member validity, every participant received a summary of his or her own interview transcript to check for accuracy (Green and Thorogood, 2018). Interview transcripts were imported and analysed in the MAXQDA Qualitative Data Analysis Software version 2018.2. Names of participants were replaced by ID-codes. Data were analysed using a thematic content approach (Green and Thorogood, 2018). The first four interview transcripts were inductively coded line-by-line by two researchers independently (M.E. and S.D.). The emergent themes were discussed in meetings until consensus was reached and an initial thematic map was developed. Subsequently, the data were inductively coded line-by-line either by one researcher (M.E. or S.D.) and checked for accuracy by the other researcher. Iterative discussions between the researchers took place to review themes for coherence, refine existing themes, identify new themes and recode some data extracts. Illustrative quotations were identified, translated from Dutch to English and presented in the Results section.

RESULTS

Stakeholder views on taxation of SSB

An overview of the emergent themes and the views of stakeholders related to these themes is presented in Supplementary Table 2.

The effects of an SSB tax on SSB purchases and consumption, health-related outcomes and reformulation

Stakeholders from all sectors, except those from trade associations, thought that an SSB tax would reduce purchases and consumption of SSB in the Netherlands. An academic in the field of health economics noted: '*That is the first lesson of economics; when the price increases the demand decreases*'. Besides price, stakeholders from all sectors, except those from the advisory body, referred to the 'signalling effect' of an SSB tax (i.e. the publicity surrounding the tax that may contribute to public awareness) to explain the effects of an SSB tax on purchases and consumption of SSB. Other academics in the

field of behavioural science and preventive dentistry and stakeholders from trade associations had doubts about the effectiveness of an SSB tax in reducing purchases and consumption of SSB, '*I do not know. Apparently, there are all kinds of reasons for people to show different purchasing behaviours, which have nothing to do with price*'. (Trade association).

Stakeholders from parliamentary parties, ministries, academia, health professional associations and health and consumer organizations indicated that an SSB tax would improve health-related outcomes in the Netherlands, such as obesity and nutrition-related diseases, dental health, mental health and life expectancy. In contrast, other stakeholders from parliamentary parties, advisory bodies, academia and trade associations had doubts about the health benefits of an SSB tax and a stakeholder from a health professional association was concerned that an SSB tax might even have detrimental consequences for dental health by stimulating sipping on SSB over a longer period of time. Stakeholders further indicated that an SSB tax could only be effective in improving health-related outcomes as a component of a comprehensive, integrated package of health interventions. An academic in the field of obesity prevention noted: '*I do not think that one isolated measure is going to make the difference, but it is rather everything together that helps*'.

Stakeholders from all sectors, except those from trade associations, noted that an SSB tax would encourage the SSB industry to reformulate SSB. In contrast, stakeholders from ministries, trade associations, health professional associations and consumer and health organizations expected that the SSB industry would not reformulate their products as a consequence of an SSB tax. '*SSB producers have a diet version in their product range. Thus, if there is a shift to their own other products… what would convince them to reformulate their SSB, which will still be sold?*' (Trade association). Concerns were expressed about a shift to artificial sweeteners as an alternative to sugar. Artificial sweeteners were seen as similar or more health-damaging compared to sugar. In contrast, a stakeholder from a trade association argued: '*I think aspartame is the most investigated ingredient in the world, which again and again has been found to be safe*'.

The appropriateness of SSB as a target for interventions in general

Stakeholders from parliamentary parties, advisory bodies, academia, health professional associations and health and consumer organizations perceived SSB as an appropriate target to reduce the level of overweight and obesity in the Netherlands, '*We know that SSB are associated with overweight and all kinds of chronic diseases. If you do not drink SSB, you do not miss any nutrients in general*'. (Academic in the field of nutrition and health). However, also concerns were expressed by stakeholders from advisory bodies, academia, trade associations and health and consumer organizations that an SSB tax could result in an excessive focus on SSB as the only cause of overweight and obesity, although it is a complex disease with many factors involved. An academic in the field of obesity prevention noted: '*It is a large pitfall that policymakers will only look at SSB because of this [an SSB tax]*'. Moreover, some stakeholders from ministries, academia, trade associations and health and consumer organizations mentioned that an SSB tax is unfair for the SSB industry, '*(…) what about donuts, what about fat. It [overweight] is about calories, it is not about sugar. Thus, it [an SSB tax] is discriminatory by definition*'. (Trade association). However, a policymaker argued: '*But that is with a lot of policies… that some people get more damaged than others when the general interest is served*'.

The appropriateness of taxation of SSB

Stakeholders from all sectors, except those from trade associations, noted that government interventions such as taxation are appropriate to reduce overweight and obesity in the Netherlands. The following reasons were mentioned to justify the need for taxation of SSB: overweight is a major problem in the Netherlands, the Dutch government has a responsibility for the health of its inhabitants, overweight has negative externalities, there is imperfect information about the health effects of SSB (consumers might not be able to act in their own best interest), there are inequalities in health, the environment provokes unhealthy behaviour, and taxation of unhealthy products is also applied in other areas in the field of lifestyle behaviours such as tobacco prevention. In contrast, stakeholders from trade associations preferred voluntary solutions, '*(…) that is, of course, a bit in the nature of an entrepreneur, they [entrepreneurs] prefer that [self-regulation] over the idea that the government is telling them what to do*'.

Academics in the field of social epidemiology and behavioural science further noted the potential of an SSB tax to reduce SSB consumption on a large scale, '*It is a measure that really has the potential to do something about the increase [in overweight] in the population. It is about a lot of people, so we cannot give all those people an individual treatment*'. (Academic in the

field of social epidemiology). In contrast, other academics in the field of political science and preventive dentistry and stakeholders from trade associations perceived universal prevention strategies targeting the general population as not appropriate to reduce SSB consumption and argued for particular attention to specific risk groups showing excessive consumption. These stakeholders suggested measures such as health education in schools and stricter regulation of child marketing to target children and adolescents in the Netherlands specifically.

The regressive and progressive effects of an SSB tax

Stakeholders from all sectors referred to the financially regressive nature of an SSB tax and indicated that the tax would financially burden those from lower socioeconomic groups more than those from higher socioeconomic groups. An academic in the field of health economics reasoned that an SSB tax may therefore lead to a widening of budgetary inequalities in the Netherlands. However, stakeholders from all sectors, except those from trade associations, also noted that progressive health benefits would justify financial regressive effects. These stakeholders referred to unhealthier dietary behaviour, including higher consumption of SSB, and a higher prevalence of overweight and nutrition-related diseases among those from lower socioeconomic groups. By disproportionally affecting SSB purchases of those from lower socioeconomic groups, stakeholders reasoned that an SSB tax may result in a decrease in socioeconomic health inequalities in the Netherlands. In contrast, an academic in the field of obesity prevention and a stakeholder from a health professional association thought that an SSB tax could widen socioeconomic inequalities in wellbeing and health, '*They [those from lower socioeconomic groups] already have less money. A Cola is just one of the last things they could award themselves with and then it will also be more expensive. That does not contribute to their quality of life*'. (Academic in the field of obesity prevention). Stakeholder views on the effects of an SSB tax on socioeconomic inequalities in budgets, dietary intakes and health are described in more detail in a separate paper (Djojosoeparto *et al.*, 2020).

Economic consequences of an SSB tax for the health sector and the SSB industry

Stakeholders from ministries, academia and health professional associations noted that healthcare costs in the Netherlands are high and increasing each year. Furthermore, these stakeholders mentioned a growing shortage of healthcare personnel (e.g. doctors, nurses and dentists) in the Netherlands due to a growing demand for care. These stakeholders thought that an SSB tax could save healthcare costs and reduce workforce shortage in healthcare by decreasing overweight and nutrition-related diseases. A policymaker had doubts about the reduction in costs and noted: '*People say that if individuals have less overweight it will save healthcare costs, but it remains complicated because most health costs are spent in the final years of life*'. While policymakers and a stakeholder from a health professional association noted that an SSB tax would reduce the SSB industry's profit and employment, others had doubts about the economic consequences of an SSB tax or noted that an SSB tax would not have economic consequences for the SSB industry, '*For the business model of SSB producers it does not matter whether they sell regular, Max, Zero or Diet*'. (Politician).

Perceived barriers and facilitators to the adoption of an SSB tax

Stakeholders identified several barriers and facilitators that may influence the adoption of an SSB tax in the Netherlands. An overview can be found in Supplementary Table 3.

The prevalence of overweight and results from voluntary industry actions

A possible increase in the prevalence of overweight and obesity was described to positively influence the likelihood of the adoption of an SSB tax in the Netherlands, '*About 50% of the Dutch adult population are currently overweight. If that is, so to say, 60% or 70% within ten years, then, of course, the urgency to do something about it will also increase*'. (Academic in the field of health economics). In addition, possible disappointing results from voluntary industry actions and other measures to reduce overweight (e.g. as agreed on in the National Prevention Agreement) were thought to facilitate the adoption of an SSB tax as well. A stakeholder noted: '*If the industry will fail to achieve the objectives that have been formulated in agreements, then an SSB tax would be a measure for the government to set in motion the desired product reformulation*'. (Health/consumer organization).

An unfavourable political context

The introduction of an SSB tax was described as a matter of political will. However, stakeholders indicated that there currently is a lack of political will in the Netherlands to implement an SSB tax. Stakeholders referred to the Dutch 'Polder Model' within Dutch politics, which is a style of policymaking with a desire for consultation, consensus and collaboration. A stakeholder from

the advisory body stated: '*In general, when things are implemented in the Netherlands, then you only see small changes at most*'. In line, stakeholders mentioned the consensus decision-making approach in the National Prevention Agreement. Stakeholders from health professional associations argued that the SSB industry should not have been involved in the National Prevention Agreement because it was perceived to hinder the adoption of an SSB tax and other measures to reduce overweight and obesity in the Netherlands.

All stakeholders indicated that political interests are crucial in the adoption of an SSB tax. A policymaker noted: '*It is a political consideration between economic business interests and societal interests*'. Political support for an SSB tax was described to vary among parliamentary parties, with the most expected opposition from right-wing, liberal and conservative parliamentary parties, and the most expected support from left-wing, socialist and progressive parliamentary parties. Stakeholders described the current political interests of the coalition parties (i.e. the parliamentary parties that make up the Cabinet, which formulates and is accountable for the Dutch Government's policies) to be unfavourable for an SSB tax. For example, the coalition parties were described to set great political store by economic business interests, self-regulation and individual freedom.

Stakeholders indicated that a change of government could facilitate the adoption of an SSB tax in the Netherlands. A politician noted: '*This [the introduction of an SSB tax] is something you can only arrange during a government formation. It is unthinkable that you can arrange this with a motion or a nice small-scale conference in between*'. Although a change of government was described to provide an opportunity for a future SSB tax, it could also complicate its adoption. For example, an academic in the field of obesity prevention and a stakeholder from a health professional association noted that re-election goals could hinder the adoption of an SSB tax because '*If they [parliamentary parties] are afraid to be outvoted then they will not dare [to introduce an SSB tax]*'. (Health professional association).

Stakeholders indicated that competing agendas of the involved ministries could complicate the adoption of an SSB tax in the Netherlands as well. The Ministry of Finance was described to pursuit a simple tax system with great value for technical feasibility, while the main aim of the Ministry of Health was described to improve public health: '*That is just a conflict of interest in the Dutch government*'. (Policymaker). A policymaker and academics in the field of tax law and health economics further indicated that an SSB tax would be easier introduced during state budget deficits as an SSB tax would provide an opportunity to raise revenue. The same policymaker noted that there was no state budget deficit in the Netherlands during the formation of the National Prevention Agreement.

Limited advocacy for an SSB tax and a strong lobby against the tax

Although national health organizations and health professionals were generally expected to support the tax by stakeholders from all sectors, stakeholders noted that there is limited and fragmented advocacy of the health sector and societal organizations for the introduction of an SSB tax in the Netherlands, '*(. . .) that [lobbying] we are still doing very fragmented and experts do that from their different expertise. Then it fades away*'. (Academic in the field of social epidemiology). A stakeholder from a health/consumer organization indicated that a lack of resources complicates their lobby: '*We said a few times that it will be good if it [the SSB tax] would be implemented, but we lacked capacity and power for a strong lobby*'. Policymakers noted that Dutch health scientists and health professionals lack decisiveness and political power. A policymaker argued that involving stakeholders that are usually not involved, such as employers who have an interest in healthy employees, could be helpful additional forces in the future advocacy for an SSB tax.

The lobby against an SSB tax, particularly from the food and beverage industry, was described to be strong and well-organized. Mentioned lobbying strategies included, for example, convincing the government and public that an SSB would be ineffective and would have negative economic consequences. Stakeholders indicated that the SSB industry has great political power in the Netherlands and noted: '*(. . .) the lobby succeeded during the National Prevention Agreement (. . .), you actually see a powerless government there*'. (Politician).

Perceived public opposition

Stakeholders from all sectors thought that the majority of the Dutch public would currently oppose an SSB tax, which was believed to hinder the adoption of the tax. The main mentioned reason for the opposition was that the public would perceive an SSB tax as patronizing, '*Again another rule. That is kind of the mood in the Netherlands*'. (Health/consumer organization). Some stakeholders argued that there is a shift towards more public support for an SSB tax. An academic in the field of medical ethics described SSB not to be cultural heritage in the Netherlands, which could facilitate this shift.

How the Dutch government would frame the main reasons for introducing an SSB tax was thought to be

important to prevent opposition from the public, '*In the Netherlands, an SSB tax is still framed as a tax intended to tease you and me or to force us to purchase less. (…) The UK government said we are not going to fight consumers, we are going to fight the [SSB] companies*'. (Academic in the field of political science). Stakeholders further argued that an SSB tax could be coupled to other societal problems to strengthen the case. These stakeholders proposed to link an SSB tax to environmental sustainability (e.g. by means of a decrease in plastic bottles and/or the production of sugar) or workforce productivity.

The value of international recommendations and implementation in other countries

Stakeholders emphasized the importance of the WHO recommendation and noted: '*It [the WHO recommendation] does matter because you could say that the WHO states it [an SSB tax] works*'. (Policymaker). Implementation in other countries was also thought to put pressure on the Dutch government. A stakeholder from a trade association noted: '*I think the government is approached by many international actors. That there is pressure on the government to think about sugar taxes*'. Some stakeholders indicated that implementation in other countries should not directly serve as encouragement for the introduction of the tax in the Netherlands because of differences (e.g. in SSB consumption, health and industry actions) between countries. However, stakeholders noted that the successes of SSB taxes in other countries provide valuable lessons for the policy processes surrounding an SSB tax in the Netherlands. A policymaker stated: '*It is not something completely new that is being invented, (…) there are several European countries that have it [an SSB tax] in various forms*'.

Potential future recommendations of the EU were thought to facilitate the adoption of the tax in the Netherlands as well because '*then they [parliamentary parties] will go along with it*'. (Trade association). In contrast, a policymaker believed that recommendations of the EU would not be helpful. A politician and an academic in the field of health economics thought that the EU would currently not have a strong opinion about an SSB tax, '*I believe the EU has greater problems to deal with*'. (Politician).

The need for a solid legal basis

Policymakers and academics in the field of medical ethics, tax law and nutrition and health noted the likelihood that the SSB industry would file lawsuits against the Dutch government for introducing an SSB tax. These stakeholders, therefore, indicated the need for a solid legal basis. For example, an academic in the field of nutrition and health stated: '*You cannot say a food company caused my children to be overweight. That is really difficult legally. However, you can say; the government has a duty to protect health (…) and could stimulate healthy choices with pricing policies*'. An academic in the field of tax law indicated the need for a clear justification for why SSB are particularly detrimental to health. A policymaker noted that if SSB are as detrimental to health as alcohol and tobacco, existing excise duties on alcoholic beverages and tobacco could be a precedent for an SSB tax.

Technical feasibility of the implementation of an SSB tax

Stakeholders from all sectors considered the implementation of an SSB tax in the Netherlands technically feasible. An academic in the field of political science noted: '*The Netherlands is just a very well-organized country. I mean, we also had an increase in the reduced VAT rate from 6% to 9% last year*'. On the other hand, stakeholders noted that an SSB tax would have a high administrative load and indicated problems within the Dutch Tax and Customs Administration, including scarce human resources, and difficulties in defining SSB. Others argued that administration should be feasible, particularly because of digitalization. Furthermore, stakeholders suggested an adjustment period for the supply chain prior to the implementation of the tax, enabling manufacturers and retailers to reformulate their products and change their prices.

Stakeholder recommendations

The design of an SSB tax if introduced in the Dutch context

Stakeholders in favour of an SSB tax and stakeholders who were neither for or against the tax provided several recommendations for the design of an SSB tax if introduced in the Dutch context (see Supplementary Table 4 for an overview). Stakeholders from all sectors argued that all beverages with sugar should be included in a Dutch SSB tax. Others recommended excluding beverages with natural sugar because '*(…) there are some health benefits to 100% fruit juices*' (Academic in the field of social epidemiology) or including artificially sweetened beverages because '*(…) there is evidence that taste preference for artificially sweetened beverages ultimately results in increased SSB consumption*'. (Academic in the field of obesity prevention).

Stakeholders from all sectors argued for a minimum tax rate of 20%. A multiple-tiered tax which applies different rates depending on sugar content was generally

preferred over a flat tax, because this type of tax was believed to be more effective in encouraging the industry to reformulate content and to be more legitimate. However, some academics in the field of social epidemiology, political science and health economics also referred to the high administrative load of a multiple-tiered tax. A stakeholder from a health professional association recommended a flat tax and noted: '*Sugar is sugar. Whether you sin a little or a lot, it remains a sin*'. A specific tax (based on quantity, e.g. volume or sugar content) was preferred over a VAT (calculated as a percentage of the retail price). An academic in the field of tax law indicated that, in contrast to a specific tax, a VAT would interfere with the market, could be spread out over other untaxed products and would increase the risk of lawsuits.

Stakeholders from all sectors noted that tax revenues of a Dutch SSB tax should be earmarked for health initiatives. In contrast, others from parliamentary parties, ministries and academia recommended to use tax revenues for the general budget, and raised several concerns about tax earmarking in the Netherlands: (i) conflicting interests, e.g. between the interests to improve public health and raise revenue, (ii) dependency, i.e. tax revenues could be lower than expected which means that no budget would be available for activities that were supposed to be funded by the revenues, and (iii) inflexibility, i.e. unlike the government's budget for expenses, the tax system cannot be changed each year. An academic in the field of political science further noted: '*If you consider a topic important in a country, you should allocate more funds to that topic. You do not have to levy earmarked taxes for it*'.

Stakeholders argued that a potential future implementation of an SSB tax in the Netherlands should go hand in hand with a public campaign to explain the detrimental health effects of sugar and SSB, the availability of healthy alternatives and the effectiveness of an SSB tax. Furthermore, stakeholders emphasized the importance of monitoring intended and unintended effects during the implementation of an SSB tax. Stakeholders also indicated that taxation of SSB should be a long-term policy because '*You cannot expect overweight to decrease next year or the year thereafter*'. (Advisory body). Finally, stakeholders argued that a Dutch SSB tax should be implemented as a component of a comprehensive set of policies to reduce overweight and obesity.

Alternative measures for an SSB tax

Stakeholders from trade associations who were against or neither for or against an SSB tax recommended several alternative measures for an SSB tax to reduce overweight and obesity in the Netherlands, including further voluntary product reformulation, an improvement in the image of artificially sweeteners, stricter regulation of child marketing, health education in schools and stimulation of physical activity. An academic in the field of preventive dentistry and a stakeholder from a health professional association mentioned well-trained lifestyle coaches, parent coaching, health education in schools and food labelling as alternative measures.

DISCUSSION

The aim of this study was to gain insight into the views of Dutch stakeholders from a diverse range of relevant sectors on taxation of SSB and on barriers and facilitators to its adoption in the Netherlands. Between and within sectors, stakeholders expressed contradictory views on the effectiveness, appropriateness and (socio)economic effects of an SSB tax. All stakeholders mentioned advantages as well as disadvantages of the tax. Overall, most concerns and doubts about an SSB tax were expressed by stakeholders from trade associations. Furthermore, stakeholders identified several barriers and facilitators that—according to them—may influence the adoption of an SSB tax in the Netherlands. We discuss the perceived barriers and facilitators and compare them with experiences from other countries under the streams of Kingdon's Multiple Streams Theory (MST). In the MST, opportunities for policy change are called 'windows of opportunity'. The MST assumes three streams flowing in the policy system: (i) the problem stream, consisting of conditions that stakeholders want to be addressed, (ii) the policy stream, including a 'soup' of proposed solutions to address the problems, and (iii) the politics stream, referring to factors such as political party ideology, interests of stakeholders and public opinion (Sabatier, 2007). Windows of opportunity open when the three streams are coupled together at critical moments in time, generally resulting from compelling problems or events in the politics stream (Sabatier, 2007).

Problem stream

Our findings suggest that the adoption of an SSB tax in the Netherlands could be related to several conditions that stakeholders want to be addressed. Firstly, an increasing prevalence of overweight and disappointing results from voluntary industry actions and other measures to reduce overweight may cause Dutch politicians to be more willing to use more 'upstream' interventions. The problem of overweight and other nutrition-related diseases was of importance in the adoption of many SSB

taxes (Le Bodo *et al.*, 2019; PAHO, 2015; Thow *et al.*, 2011a; Thow *et al.*, 2011b; HM Revenue and Customs, 2016). Related to an increasing prevalence of overweight, stakeholders mentioned increasing healthcare costs in the Netherlands. Per capita healthcare expenditure in the Netherlands currently ranks fifth on a list of 31 European countries (CBS, 2020). Secondly, stakeholders noted that a state budget deficit would increase the likelihood of the adoption of an SSB tax in the Netherlands. Budget deficits appeared to be extremely important in opening windows of opportunity for health-related food taxes (Le Bodo *et al.*, 2019). For example, revenue-raising needs were present during the adoption of health-related food taxes in France, Denmark, Finland, Hungary, Mexico and several Pacific countries (Le Bodo *et al.*, 2019; PAHO, 2015; Thow *et al.*, 2011a; Thow *et al.*, 2011b). Thirdly, stakeholders suggested coupling an SSB tax to other societal problems to gain public and political attention, e.g. to environmental sustainability. The coupling of an SSB tax to an alternative problem such as environmental health and sustainability was also identified as a facilitator to the adoption of an SSB tax in Australia (Sainsbury *et al.*, 2020). In a recently published Commission Report of The Lancet, Swinburn *et al.* demonstrated that ultra-processed foods (including SSB) are one of the drivers of the 'the global syndemic of obesity, undernutrition, and climate change' (Swinburn *et al.*, 2019). To the best of our knowledge, no research has been conducted to investigate the potential effects of an SSB tax on environmental sustainability (e.g. by means of a decrease in plastic bottles and/or the production of sugar) or the potential effects of sustainability measures (e.g. deposits on cans and small bottles) on SSB purchases. This investigation requires collaboration between climate change and health researchers.

Noteworthy, we conducted the stakeholder interviews in 2019. Recently, the context has changed due to the COVID-19 pandemic, which may affect the adoption of an SSB tax in several ways. For example, evidence suggesting that those with obesity are at an increased risk of severe COVID-19 illness (e.g. Simonnet *et al.*, 2020) resulted in considerable attention to the problem of overweight. It was advocated in local newspapers that the Dutch government should take more responsibility in the prevention of overweight through regulations such as an SSB tax. This may have led to an increased willingness of the Dutch government to address the problem of overweight by means of taxation of SSB. Additionally, after several years of budget surplus, the Dutch government assumes a state budget deficit as a result of the COVID-19 pandemic (Rijksoverheid, 2020). The Dutch government may view an SSB tax as an opportunity to raise revenue.

Policy stream

Taxation of SSB was generally considered technically feasible in the Netherlands by the stakeholders included in our study. This finding is in line with research investigating the views on health-related food taxes and subsidies of national stakeholders in New Zealand, a country that also did not (yet) introduced an SSB tax (Signal *et al.*, 2018). New Zealand stakeholders considered an SSB tax as 'the easiest intervention to implement' because SSB are not 'a core food', SSB provide no nutritional value and an SSB tax would only affect a limited part of the food supply (Signal *et al.*, 2018). The WHO regards taxation of products such as SSB as the most feasible tax on dietary products to implement (WHO, 2016a). However, some of the stakeholders in our study also mentioned problems within the Dutch Tax and Customs Administration, including scarce human resources. This indicates the importance of engaging the implementing agency at an early stage to ensure feasible and acceptable SSB tax proposals. According to our findings, a solid legal basis could further be important in a window of opportunity for policy change. To date, the legality of SSB taxes has not been challenged in Europe (Le Bodo *et al.*, 2019). Potential explanations include that the potential cost-effectiveness of an SSB tax as a component of a comprehensive approach is well-documented and that the implementation of an SSB tax is recommended by the WHO (Le Bodo *et al.*, 2019; Baker *et al.*, 2018; WHO 2016b).

Stakeholders generally thought that an SSB tax is effective in improving health-related outcomes or had doubts about the health benefits of an SSB tax. A stakeholder from a health professional association was concerned that an SSB tax might have detrimental consequences for dental health by stimulating sipping on SSB over a longer period of time. To the best of our knowledge, this argument against an SSB tax has not arisen in the SSB tax debate before. We recommend future studies on taxation of SSB to assess whether this view is more widespread in the health sector. The evidence of the effects of taxation of SSB on dental health is limited, but several studies demonstrated that an SSB tax could reduce dental caries (Sowa *et al.*, 2019).

Politics stream

Stakeholders described the introduction of an SSB tax in the Netherlands as a matter of political will. Political will is regarded as a crucial factor for health policy. As

the WHO-Director-General Dr Tedros stated during the 2019 World Health Summit in Berlin, Germany: '*We often say that we know what to do, and how to do it. If only there was political will. It's the biggest deficit we face. Health is a fundamental human right. (…) But it's a right that must be realized through political choice*'. (WHO, 2019). Stakeholders indicated a lack of political will in the Netherlands to implement an SSB tax at the time of the interviews. Stakeholders referred to the Dutch 'Polder Model' within Dutch politics with its desire for consultation, consensus and collaboration. This policymaking style was considered unique for the Netherlands. The Dutch 'Polder Model' in policymaking may complicate the adoption of taxation of SSB and could make lobbying more accepted in the Netherlands than in countries with a more paternalistic government (Campbell and Pedersen, 2015). In the present study, stakeholders described the political interests to be unfavourable for an SSB tax in the Netherlands at the time of the interviews. Our findings suggest that a change of government could be an important game changer and open a window of opportunity for policy change. Based on an analysis of thirteen case studies on taxation of unhealthy energy-dense foods and SSB, Hagenaars *et al.* indicated that such taxes could follow both left-wing and right-wing political rationales (Hagenaars *et al.*, 2017). Parliamentary elections were held in the Netherlands in March 2021. Five parliamentary parties proposed an SSB tax in their election programme and two parties proposed to increase taxes on 'unhealthy' food products. At the time of writing, the formation of the new Dutch government is still ongoing.

In line with previous literature, we found that there is a strong and well-organized lobby particularly from the food and beverage industry against an SSB tax, and limited and fragmented advocacy for the introduction of an SSB tax in the Netherlands. In Denmark, an imbalance between the strong influence by the industry and limited inputs from public health professionals was one of the factors that contributed to the repeal of the Danish saturated fat tax (Vallgarda *et al.*, 2015; Bodker *et al.*, 2015). During tax proposals in Richmond, El Monte and Telluride (USA), a wide range of speakers voiced opposition in the news, while pro-tax arguments mainly came from a few politicians and public health advocates (Nixon *et al.*, 2015). Although the soda industry was absent from the news coverage, many who spoke against the tax were industry-funded. All three tax proposals ultimately failed. In Australia, strong political influence of the industry and fragmented advocacy efforts for an SSB tax were identified as barriers to the adoption of an SSB tax as well (Sainsbury *et al.*, 2020). In contrast, the announcement of the UK Soft Drinks Industry Levy was preceded by a 'period of intense campaigning by sugar taxation advocates, including Jamie Olivier [an English chef and restaurateur], campaign group Action on Sugar, advisory body Public Health England, and professional associations' (Buckton *et al.*, 2019). A discourse network analysis of the UK newspaper coverage found close agreement among these advocacy coalitions in support of the levy (Buckton *et al.*, 2019). In addition, financially supported health organizations and consumer groups seem to have played a role in passing SSB taxes in Mexico (PAHO, 2015).

Stakeholders included in our study thought that the majority of the Dutch public would oppose an SSB tax at the time of the interviews. Public acceptability is an important dimension in its adoption (Eykelenboom *et al.*, 2019). Public acceptability of an SSB tax in the Netherlands was investigated in an online survey among adults representative of the Dutch population for age, sex, educational level and location (Eykelenboom *et al.*, 2020). Of the participants, 40% supported (43% opposed) an SSB tax in general and 55% supported (32% opposed) an SSB tax if revenue is used for health initiatives (Eykelenboom *et al.*, 2020). These findings indicate that raising the revenue for health initiatives could elicit increased public acceptability.

Study strengths and limitations

The main strength of this study is the inclusion of Dutch stakeholders from a diverse range of relevant sectors and professional backgrounds. To ensure that we invited all relevant stakeholders, each participant was asked to identify stakeholders that were lacking from the initial list of stakeholders that was developed by the research team. The use of a qualitative design further strengthens our findings. Since no research has been conducted to investigate stakeholder views on taxation of SSB in the Netherlands before, the interviews provided in-depth information that could not have been obtained through quantitative research. Validity was enhanced by providing participants a summary of their interview transcripts to check for accuracy. Our study also has several limitations. Firstly, despite the efforts made (e.g. reminder e-mails and calls), eight potential participants did not respond to our invitation and ten declined. We collected reasons for declining, which enables us to reflect on our study sample. Non-participation was high among policymakers and politicians, particularly among those from whom we expected opposition to the tax. Many stated that they were unwilling to participate or were too busy. A potential explanation might be the politically sensitive nature of taxation of SSB. Furthermore, the majority of

our research team holds a degree in health sciences. Invitees who declined may have assumed that our research team supports an SSB tax and therefore may have been less willing to participate in this study. Secondly, the views of the stakeholders included in this study may not be representative of the views of their sector as a whole. However, we selected stakeholders with top positions in their sector and asked them to represent their sector as much as possible. Thirdly, interviews were conducted by two researchers trained in qualitative research. To minimize interviewer bias, the interviewers used an interview guide, practiced together and had close communication during the data collection.

CONCLUSIONS

Between and within sectors, Dutch stakeholders expressed contradictory views on the effectiveness, appropriateness and (socio)economic effects of an SSB tax, which may complicate the adoption of such a policy. For an SSB tax to be successful, it is important to address commonly raised concerns. For example, the concern that an SSB tax could result in an excessive focus on SSB as the only cause of overweight and obesity, although it is a complex disease with many factors involved, could be addressed by introducing an SSB tax as a component of an integrated package of health interventions. Stakeholders identified several barriers that—according to them—may prevent the adoption of an SSB tax in the Netherlands, including an unfavourable political context, limited advocacy for an SSB tax, a strong lobby against an SSB tax, perceived public opposition, administrative load and difficulties in defining SSB. According to stakeholders, the adoption of an SSB tax could be facilitated by an increasing prevalence of overweight, disappointing results from voluntary industry actions, a change of government, state budget deficits, a shift in public opinion, framing messages related to the objective of the tax, the use of an SSB tax as a potential solution to other societal problems, international recommendations and a solid legal basis. If introduced in the Dutch context, stakeholders in favour of an SSB tax and stakeholders who were neither for or against the tax generally recommended: (i) a multiple-tiered specific tax on all beverages with sugar, (ii) a minimum tax rate of 20%, (iii) to implement the tax as a component of an integral approach, and/or (iv) to use revenues for further improvement of public health. When generalizing our findings to other cases at the international level, differences between the political, economic and sociocultural contexts should be taken into account. We encourage similar research on stakeholder views in other countries to further inform SSB tax policy processes.

SUPPLEMENTARY MATERIAL

Supplementary material is available at *Health Promotion International* online.

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ETHICAL APPROVAL

The study was conducted according to the ethical standards declared in the Declaration of Helsinki. In accordance with the Dutch Medical Research Involving Human Subjects Act, approval of the study by the Medical Ethics Committee was not required. Written informed consent was obtained from all participants before each interview.

CONFLICT OF INTEREST

The authors declare that they have no conflict of interests.

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