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State accountability and legal responsiveness in preventing diabetes mellitus from an early age: Between moving towards a golden Indonesia or an anxious Indonesia

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ABSTRACT

Until now, diabetes mellitus not only attacks adults but also attacks children as the nation's next generation. This is of particular concern if it is related to the drastic increase in the number of diabetes mellitus sufferers in Indonesia. Apart from Indonesia, there are also several other countries that are fighting high rates of diabetes mellitus, such as China, Singapore, England and other countries. The high rate of diabetes mellitus in society is caused by inaccurate information on the contents of a product, there are terms that are difficult for consumers to understand, nutritional information that is not open/hides negative facts about the content in the product and low public awareness in paying attention to the composition of the nutritional value of food products and drink to be consumed. So that legal protection and responsiveness have not yet been maximally realized for the public as consumers. This research aims to examine the accountability and responsiveness of law in Indonesia in preventing diabetes mellitus from an early age by conducting a comparative study between countries that have been effective in reducing diabetes mellitus rates. The research method used is a doctrinal normative legal research method with a statutory regulation approach, a conceptual approach and a comparative approach. The results of this research show that there are effective strategies in preventing diabetes mellitus, namely updating nutritional value information labels and implementing excise taxes on the food and sweetened beverage industry. Adopting these strategies is a form of revolution and a form of legal responsiveness in improving the level of national health towards a Golden Indonesia.

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INTRODUCTION

Health is the most important thing every human needs in carrying out all their daily activities. Therefore, national health is the main foundation and basic needs of every citizen (HAM) which must be met by the state. So that national health can run in accordance with the ideals/goals of the state as stated in Pancasila and the 1945 Constitution, the state has an obligation to fulfill the health and welfare of the people as stated in article 1 paragraph 1 of Law No. 17 of 2023 concerning Health which reads "Health is a state of health a person, both physically, mentally and socially and not just free from disease to enable him to live a productive life". Conceptually, the state not only provides the right to health, but the state is also present in efforts to improve the health of its citizens. Because health problems and disorders for every citizen will reduce productivity and cause losses for the country, so in order to improve the level of national health, it is necessary to improve public health. There are state efforts to improve national health at this time, such as providing information about health problems, providing education on disease prevention, and providing health services to maintain and increase the level of national health (Augustia et al., 2024).

This is in accordance with the motto in the world of health, namely "Prevention is better than cure". Prevention is better than cure because the costs of prevention are lower compared to treatment which also takes a relatively long time (Kurniasih et al., 2024). One of the prevention efforts in a promotive form that can be carried out is to increase balanced nutritional intake to meet the needs of daily life. In reality, Indonesia as a developing country still experiences difficulties in implementing these promotional efforts, especially in terms of fulfilling balanced and equitable nutritional intake in society. There is still the principle of "The important thing is to eat as long as you are full" in society which is influenced by low income/economic inequality. The long-term effects of a lack of attention to providing balanced nutrition in society can cause permanent genetic disorders/diseases (hereditary diseases) such as stunting, diabetes mellitus, obesity, congenital abnormalities and cancer. There are other problems that also reduce the level of national health, namely the proliferation of food and beverage products circulating in society that contain synthetic (engineered) chemicals which function to enhance taste, aroma, color, texture and shelf life, etc (Amir et al., 2021). Apart from the proliferation of products containing flavourings, colorings and preservatives, there is also a proliferation of food and beverage products containing high levels of added sugar (Sucrose). Based on data from the 2023 Indonesian Health Survey (SKI) Report (Ministry of Health), it was found that there has been an increase in the prevalence of diabetes mellitus in Indonesia, which has increased by 1.7% to 11.7% from the previous year (BKPK, 2024). Meanwhile, data from the International Diabetes Federation (IDF) shows that Indonesia has been ranked fifth as the country with the highest number of diabetes mellitus, namely 19.5 million sufferers and is predicted to increase to 28.6 million in 2045 (Soewito et al., 2024). Based on data from the Individual Food Consumption Survey (SKMI), the largest sugar consumption comes from granulated sugar, jam, candy, syrup, chocolate, sweetened condensed milk to jelly/gelatin with artificial sweeteners. Foods that are high in sugar are very easy for children to find and access in the form of snacks in school canteens and small stalls. This convenience allows children to buy and consume it, thereby potentially triggering diabetes mellitus from an early age. This statement is supported by data from Basic Health Research (Riskesdas) which states that 2 out of 3 teenagers aged 5-19 years consume sweetened drinks at least once a day or more (Yuningrum et al., 2021).

On the other hand, based on data from the Indonesian Pediatrician Association (IDAI), it is stated that the prevalence of children suffering from diabetes mellitus has increased 70-fold from 2010 to 2023. The Indonesian Pediatrician Association (IDAI) has recorded that there will be 1,645 children in Indonesia suffering from diabetes mellitus in 2023 with the composition of 60% of sufferers being girls, 46% aged 10-14 years and 31% aged 14 years and over (Syafitri et al., 2023). Apart from that, the Main Director of the Health Social Security Administration (BPJS) stated that child patients suffering from diabetes mellitus have increased by around 1000 cases in 2022. In fact,

since 2013, the Ministry of Health has formed and issued Minister of Health Regulation No. 30 of 2013 concerning the Inclusion of Information on Sugar, Salt and Fat Content as well as Health Messages for Processed Food and Ready-to-Eat Food (Temesvari, 2018). Apart from these regulations, there are BPOM Regulation No. 11 of 2019 concerning the maximum limit for the use of artificial sweeteners for processed food products and BPOM Regulation No. 26 of 2021 regarding labeling regulations on packaging regarding the nutritional content of processed food. The formation of these regulations aims to provide information to the public about the nutritional value contained in food and drinks presented in the food and drink table.

However, efforts to include nutritional value in food and beverage product packaging are still ineffective due to several main factors such as inaccurate information on the content of a product, terms that are difficult for consumers to understand, using clever terms to hide negative facts about the content in the product, etc. low public awareness in paying attention to the nutritional value composition of food and beverage products to be consumed (Pandie & Aloysius, 2023). Apart from that, according to data from the Center for Indonesia's Strategic Development Initiatives (CISDI) it is also stated that these regulations are not working well because there is still a proliferation of high-sugar food and drink products that are easily accessible to the public, especially children as the next generation. This of course threatens the level of national health towards a golden Indonesia in 2045 and is certainly very detrimental to society as consumers.

Remembering that previous research which focused on discussing the prevention of diabetes mellitus in society was carried out by Mita Ardila, et al (2023) which examined health promotion, prevention and control of diabetes mellitus in adolescents (Ardila et al., 2024). Research by Fermata Sari, et al (2023) which examines increasing knowledge of health cadres and the community in preventing diabetic foot ulcers in Burai Village (Sari et al., 2023). Research by Sisilia Rammang, et al (2023) which examines the control of diabetes mellitus through education and checking blood sugar levels during (Rammang et al., 2023). Research by Henny Purwandari and Byba Melda Suhita (2023) which examines thisincreasing knowledge through health education on healthy living to prevent complications of diabetes mellitus in the Prolanis "SEHATI" group of Nganjuk Community Health Center (Purwandari & Suhita, 2023). And research by Niken Wulan Hasthi, et al (2023) which examines thisoutreach and control of non-communicable diseases diabetes mellitus in Tenajar Village, Kertasemaya District, Indramayu Regency (Murti et al., 2023).

Based on previous research, there is a difference in the focus of the research conducted by the author with previous research, although the theme is the same regarding the prevention of diabetes mellitus in Indonesia, this research has differences and advantages in that it focuses on legal responsiveness and state responsibility in preventing diabetes mellitus from an early age using methods. comparative studies to realize a golden Indonesia in accordance with the country's ideals/goals. The urgency of this research is based on the high rate of diabetes mellitus in society, especially affecting children as the next generation, the weak effectiveness of regulations in overcoming/suppressing the high rate of diabetes mellitus in society and the increasingly declining level of national health at this time. Therefore, discussion regarding state responsibility and legal responsiveness in preventing diabetes mellitus from an early age in Indonesia is an important and actual matter for further study. Based on the background that has been explained, the problems raised by the author in this research are: 1). How is the current growth in the prevalence of diabetes mellitus globally and nationally? 2). How effective is the current regulation on controlling sugar content in food and beverage products in Indonesia? 3). How do the regulations for preventing and controlling high-sugar food and beverage products compare in Indonesia with other countries?

RESEARCH METHOD

This research uses a type of normative juridical research method that is doctrinal in nature. This type of legal research analyzes a law as a norm that guides behavior and an inventory of positive

law (Zainuddin & Kirana, 2023). The approaches used in this research are the statutory approach, conceptual approach and comparative approach. A legislative approach was used because this research examines and examines regulations governing the prevention of diabetes mellitus and consumer protection for high-sugar products. Apart from that, a conceptual approach is used which moves from views to doctrines developed in law and health sciences as a basis for building arguments in resolving the issues/problems being faced. And the use of a comparative approach, namely a comparison of legal regulations governing the prevention of diabetes mellitus and consumer protection for high-sugar products in other countries. Normative juridical legal research is research that examines secondary data obtained indirectly using library study techniques so it is referred to as theoretical/dogmatic legal research. The secondary data used is primary legal materials such as the 1945 Constitution of the Republic of Indonesia, Minister of Health Regulation No. 30 of 2013 concerning the Inclusion of Information on Sugar, Salt and Fat Content as well as Health Messages for Processed Food and Ready-to-Eat Food, BPOM Regulation No. 11 2019 regarding the maximum limit for the use of artificial sweeteners for processed food products and BPOM Regulation No. 26 of 2021 regarding labeling regulations on packaging regarding the nutritional content of processed food to excise tax regulations on sweetened foods and drinks, and secondary legal materials in the form of previous research, papers and articles related to the research theme. The analytical method in this research uses a descriptive-qualitative analysis method which analyzes data sourced from legal materials in the form of regular and coherent sentences (Tan, 2021)..

RESULTS AND DISCUSSIONS

Current Growth in the Prevalence of Diabetes Mellitus Globally and Nationally

The proliferation of sweetened foods and drinks with high sugar content in packaged form in Indonesia is of particular concern if it is linked to the continued drastic increase in the number of sufferers of non-communicable diseases such as diabetes mellitus. According to the Director of Prevention and Control of Non-Communicable Diseases, Dr. Eva Susanti stated that diabetes mellitus is the mother of all diseases because if it is not prevented and controlled it has the potential to cause other diseases such as heart disease, stroke and kidney problems (Health 2023). Even today, the increase in diabetes mellitus sufferers has attacked people of all ages. Based on data from the International Diabetes Federation, globally, prevalence data related to diabetes is estimated to have reached 414 million sufferers aged 20-79 years and is expected to continue to increase (Hoerunisa et al., 2023). According to the International Diabetes Federation, there is a drastic increase of 46% in the prevalence of diabetes mellitus from year to year globally. Such as North America and the Caribbean which has increased 24%, Europe has increased 14%, the West Pacific has increased 27%, the Middle East and North Africa has increased 50%, and Southeast Asia has increased 68% (Ogurtsova et al., 2017). This prevalence also shows that Southeast Asia is the 3rd place holder for increasing diabetes mellitus worldwide. Therefore, diabetes mellitus is widespread in developing and lower middle class countries. The International Diabetes Federation explains that developing countries have the largest number of people diagnosed with diabetes mellitus due to lifestyle and consumption of sweetened foods and drinks which are very easy to find and unlimited (Restika BN et al., 2019). Based on data from the International Diabetes Federation, the left side table shows the top 10 ranking data based on the number of adults (20-79 years) with undiagnosed diabetes. China is in first place with 72.8 million, India is in second place with 39.4 million and Indonesia is in third place with 14.3 million. The table on the right makes it clear that there are 14,341.9 million undiagnosed people in Indonesia. The International Diabetes Federation also recorded that 5,654.3 million Indonesians had diabetes from 2000, 7,291.9 million in 2011, 19,465.1 million in 2021, 2030 is predicted to increase to 23,328.0 million, and 28,569.9 million in 2045.

Based on data from the International Diabetes Federation, the prevalence of diabetes classified by gender among women and men (20-79 years) based on a bar chart shows that as people get older, the prevalence of diabetes increases.mellitusand indications of diabetesmellitusIt occurs higher in men aged 20-69 years, while aged 70-79 years the highest prevalence occurs in women.Nationally, based on data from the 2023 Indonesian Health Survey (SKI) Report (Ministry of Health), it was found that there has been an increase in the prevalence of diabetes in Indonesia, which has increased by 1.7% to 11.7% from the previous year (BKPK, 2024). Meanwhile, data from the International Diabetes Federation (IDF) shows that Indonesia has been ranked fifth as the country with the highest number of diabetes mellitus, namely 19.5 million sufferers and is predicted to increase to 28.6 million in 2045 (Haryati et al., 2023). Based on data from the Individual Food Consumption Survey (SKMI), the largest sugar consumption comes from granulated sugar, jam, candy, syrup, chocolate, sweetened condensed milk to jelly/gelatin with artificial sweeteners.

Foods that are high in sugar are very easy for children to find and access in the form of snacks in school canteens and small stalls. This convenience allows children to buy and consume it, thereby potentially activating diabetes mellitus from an early age. This statement is supported by data from Basic Health Research (Riskesdas) which states that 2 out of 3 teenagers aged 5-19 years consume sweetened drinks at least once a day or more (Yuningrum et al., 2021). On the other hand, based on data from the Indonesian Pediatrician Association (IDAI), it is stated that the prevalence of children suffering from diabetes mellitus has increased 70-fold from 2010 to 2023 (Ulya et al., 2023). The Indonesian Pediatrician Association (IDAI) has recorded that there will be 1,645 children in Indonesia suffering from diabetes mellitus in 2023 with the composition of 60% of sufferers being girls, 46% aged 10-14 years and 31% aged 14 years and over (Syafitri et al., 2023). Apart from that, the Main Director of the Health Social Security Administration (BPJS) stated that child patients suffering from diabetes mellitus had increased by around 1000 cases in 2022 and had an impact on the amount of claims for health insurance financing amounting to IDR 17.8 trillion/8.6% of total contribution. And this is confirmed by data from the Indonesian Minister of Health in 2022, that the Indonesian population experiences diabetes mellitus which is caused by high sugar consumption in Indonesian society. This is also a very worrying situation that children as the nation's next generation have adopted unhealthy lifestyles, namely due to the consumption of foods and drinks containing high levels of sugar without realizing it.

Effectiveness of Regulations for Controlling Sugar Content in Food and Beverage Products in Indonesia Currently

The rise of food and beverage products containing high sugar using artificial sweeteners is one of the causes of diabetes mellitus in society, especially children (Tazkiah et al., 2024). Artificial sweeteners in food and beverage products are very easy to find and are a substitute for sugar produced from an engineering/chemical process so that the sweetener has a level of sweetness that is many times sweeter than granulated sugar/palm sugar (Nurpratama et al., 2023). The widespread use of artificial sweeteners in food and beverage products circulating in the community is because artificial sweeteners can be accessed at a cheaper price than using granulated sugar/palm sugar.There are several types of artificial sweeteners that are widely used in food and beverage products which have the potential to cause diabetes mellitus, such as (Safitri & Suwanto, 2024): 1). Aspartame, Aspartame is an artificial sweetener that is commonly used as a sweetener in chewing gum, breakfast cereals, jelly and carbonated drinks. Aspartame as an artificial sweetener is 220 times sweeter than natural sugar. The content of aspartame consists of amino acids, aspartic acid, phenylalanine, and a small amount of ethanol. The daily consumption limit is 50 mg/kg body weight/day (equivalent to 75 sweetener sachets). 2). Saccharin, Saccharin is an artificial sweetener with a sweet taste that is 300-400 times stronger than ordinary sugar. The use of saccharin in one serving for processed foods should not exceed 30 mg. As for drinks, there should be no more than 4 mg/10 ml of liquid. Saccharin is used as a sugar substitute for people

with diabetes mellitus because people with diabetes mellitus find it difficult to maintain a balanced diet that meets their calorie needs, especially sweet foods. The daily consumption limit is 15 mg/kg body weight/day (equivalent to 15 sweetener sachets).

3). Sucralose, Sucralose is an artificial sweetener produced from sucrose. Sucralose has a sweet taste 600 times stronger than natural sugar. This ingredient is commonly used in baked or fried food products. The ideal daily consumption of sucralose is 5 mg/kg weight/body/day (equivalent to 23 sachets of sweetener). 4) Acesulfame Potassiu, Acesulfame Potassiu is an artificial sweetener used in various food products because it is stable at high temperatures and dissolves easily in water. It has a sweet taste intensity that is 200 times stronger than natural sugar. The recommended daily consumption limit for acesulfame potassium is 15 mg/kg body weight/day (equivalent to 23 sachets of sweetener) .5). **Neotam**, Neotam is an artificial sweetener used in low-calorie foods. Chemically, it contains almost the same as aspartame, but it tastes 40 times sweeter than aspartame. Neotam has a sweet taste 7000-13,000 stronger than natural sugar. Neotam can be consumed up to the daily consumption limit of 0.3 mg/kg body weight/day (equivalent to 23 sachets of sweetener). Even though sugar is one of the main sources of energy for the human body and has an important role, sugar should not be consumed in excess. To achieve balanced healthy growth, the sugar intake that is allowed to be consumed is only around 5% of daily calorie needs. As a reference, sugar consumption is also based on age, namelyadults no more than 30 grams (7 teaspoons) per day, Children aged 7–10 years no more than 24 grams (6 teaspoons) per dayAndChildren aged 2–6 years no more than 19 grams (4 teaspoons) per day. Meanwhile, based on Minister of Health Regulation No. 30 of 2013, the recommended daily sugar consumption is equivalent to 4 tablespoons/50 grams per day (Ferencia et al., 2023).

The sweet taste caused by the sugar content in many food and beverage products is found in processed form so it is very difficult to see such as food products in the form of bread, donuts, cakes, biscuits and other food products. Meanwhile, in the form of processed beverage products, they can take the form of packaged milk, packaged tea, energy drinks, syrup, packaged juice and even ice cream (Trijayanti & Gani, 2023). In fact, based on data from Basic Health Research (Riskesdas) Indonesia has found that the level of consumption of sweet foods in society has reached 87.9% and consumption of sweet drinks has reached 91.49%. Based on these data, sugar consumption in Indonesia is classified as very high even though there have been recommendations regarding limits on sugar consumption per day to prevent diabetes.mellitus. Based on data from the Institute for Health Metrics and Evaluation, diabetesmellitusis the 3rd highest cause of death in Indonesia since 2019, equivalent to 57.42 deaths per 100,000 population (Suib et al., 2024). This is directly proportional to data from the International Diabetes Federation (IDF) which found that since 2021, there has been a rapid increase in the number of diabetes sufferers.mellitusin Indonesia, namely around 47% in the last ten years. Basically, sugar is a basic human need so it is not something that should be avoided, but its consumption needs to be limited so that it is not excessive (controlled). In Indonesia, there are several regulations to prevent and control sugar content in food and beverage products like Minister of Health Regulation Number 63 of 2015 concerning Amendments to Minister of Health Regulation Number 30 of 2013 concerning the Inclusion of Information on Sugar, Salt and Fat Content and Health Messages for Processed Food and Ready-to-Eat Food, Food and Drug Monitoring Agency Regulation No. 1 of 2022 concerning Supervision of Claims on Processed Food Labels and Advertisements, Government Regulation No. 69 of 1999 concerning Food Labels and Advertisements, Government Regulation (PP) Number 86 of 2019 concerning Food Safety, Indonesian National Standard (SNI 01-2891-1992) Concerning How to Test Food and Drinks, Presidential Instruction No. 1 of 2017 concerning the Healthy Living Community Movement (GERMAS), Law No. 8 of 1999 concerning Consumer Protection, Regional Regulations (Local Regulations), and another regulation.

Society as consumers and business actors as producers have an interrelated relationship and have equal positions. Business actors as parties who produce food and beverage products play

an important role in realizing better national security and health status. This is because business actors as producers know the materials used to produce products that are directly consumed by the wider community, so it is their obligation to provide food and drink products that are healthy and do not endanger public health, especially diabetes mellitus (Fithri et al., 2021). However, in reality, even though there are several regulations regarding efforts to control sugar in food and beverage products, there are still many business actors as producers of food and beverage products who carry out practices that are against the law/violate regulations, resulting in the ineffectiveness of regulating efforts to control unhealthy products. which leads to the high number of diabetes mellitus sufferers in Indonesia and the decline in national health levels. Forms of unlawful acts that are often committed by business actors as producers of food and beverage products in Indonesia, such as food froud actions, namely acts of replacing, adding, destroying or deliberately misrepresenting food and beverage products and making false/misleading statements made for the sake of personal gain (Rahmawati, 2021). The rise of food froud is a serious violation in the field of food safety which directly affects people's health as consumers. This is caused by the proliferation of food and beverage products that are counterfeited/have labels that do not match the actual composition and ingredients used which can cause bodily reactions such as allergies, damage body organs and cause diabetes mellitus.

Apart from this, there are other challenges and problems, namely people's habits as consumers in deciding to buy food and beverage products which are more influenced by the price and sensory characteristics of the product (size, taste and shape) compared to paying attention to/analyzing information related to the product's nutritional and nutritional labels. There are only a few people who read nutritional and nutritional value information labels and some consumers consider that the nutritional information on product labels is too scientific and therefore difficult to understand, which is a factor that greatly influences the effectiveness of implementing policies to control sweetened food and beverage products (Sinaga & Simanungkalit, 2022).

Comparison of Regulations for Prevention and Control of High Sugar Food and Beverage Products in Indonesia with Other Countries

Regulations related to the prevention and control of high-sugar food and beverage products in Indonesia have been regulated in the Food and Drug Supervisory Agency Regulation No. 26 of 2021 concerning Nutritional Values on Processed Food Labels, especially in article 2 which states that every person who produces and/or distributes processed food must include nutritional value information on the label. The procedure for including nutritional value information is based on the Regulation of the Head of the POM Agency (No. HK.03.1.23.11.11.09605) of 2011 concerning Amendments to the Regulation of the Head of BPOM (No. HK.00.06.51.0475) of 2005 concerning Guidelines for Including Nutritional Value Information on Labels Food (Novayani & Ade Mulada, 2023). The inclusion of nutritional value information must be included in the label with the aim of making it easy for the public as consumers to recognize and understand the nutritional content of a food and beverage product that will be consumed. Based on BPOM guidelines, the information that must be included in the nutritional value information table is serving size, number of servings per package, type and amount of nutritional and non-nutrient content, RDA percentage, footnotes, total energy, total fat, saturated fat, protein, carbohydrates total, sugar content, Sodium (Zantika & Kurnia, 2023). Based on Food and Drug Supervisory Agency Regulation No. 26 of 2021 concerning Nutritional Value Information on Processed Food Labels, the format for including nutritional value information tables is grouped based on the ING 7 Main Nutrient Table and the Complete Nutrient ING table in Tabular format and Linear format. that is:

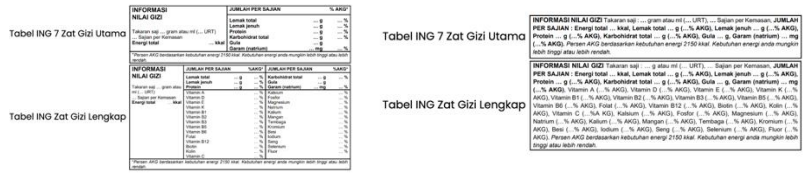

Figure 1. Tabular format of nutritional value information
Source: Food and Drug Administration (Food and Drug Monitoring Agency 2021)

When compared with America, the nutritional value information labels published by the American Food and Drug Administration have undergone nutritional label updates, making it easier for people as consumers to read labels more often before consuming food and beverage products, such as:

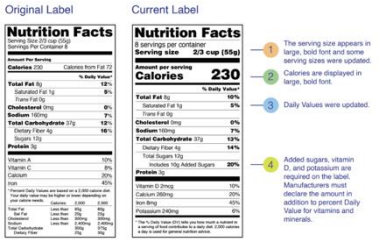

Figure 2. Nutrition information table formats in America
Source: American Food and Drug Administration (FDA)(US Food and Drug Administration 2023)

There has been a change in the nutritional information table in America which focuses on including information related to calories, portions, serving size, amount of sugar and types of vitamins and nutrients. Nutritional information in America is made concisely and printed in larger and bolder font sizes so that people as consumers can easily pay attention to the nutritional value contained in food and beverage products before consuming them. Meanwhile, Singapore has also carried out reforms in labeling nutritional information on food and beverage products called Nutri-Grade. It can be clearly seen that there are efforts to group foods and drinks based on the best and worst provisions (depending on sugar content) which are grouped alphabetically A, B, C and D, such as:

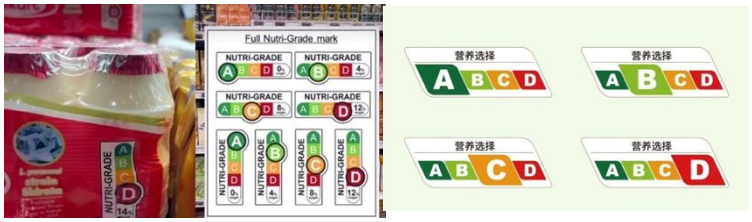

Figure 3. Nutrition information table formats in Singapore and China
Source: Health Hub Singapore(Singapore, 2023) and (保健时报, 2024)

The Nutri-Grade labeling scheme in Singapore is based on the sugar and fat content in food and beverage products. Alphabetical grouping of nutrient levels in food and beverage products has its own meaning, namely (Health Screening Singapore 2023): (1) **Group A**: food and beverage products with an A rating contain little sugar, no sweeteners, and only a small amount of saturated fat. On average it only contains less than 1g of sugar per 100 ml. Examples of products include coffee without sugar, bubble tea without sugar and toppings. (2) **Group B**: food and

beverage products with a B rating have low levels of sugar and saturated fat. This food and beverage product is still a healthier choice recommended by the government because it contains less than 5g sugar per 100 ml, such as bubble tea with 30-50 percent sugar content, without toppings and milk. (3) **Group C**: food and beverage products with a C value contain a lot of sugar and saturated fat. The Singapore government advises to limit these drinks if possible because the sugar content is in the range of 5 to 10g per 100 ml, for example bubble tea with 70 percent sugar without toppings and milk. (4) **Group D**: food and beverage products with a D value contain the most sugar and saturated fat. More than 10g of sugar per 100 ml is found in these drinks, usually in bubble tea with 100 percent sugar and milk and toppings.

It is hoped that this practical labeling provision based on Nutri-Grade will make it easier and wiser for Singaporeans to choose healthier drinks and avoid diabetes mellitus. The aim of implementing labels on food and beverage products in Singapore is part of a strategy to provide information about products to the public as consumers so that they can easily educate consumers about the quality of the nutritional content of the products they will consume, especially regarding the level of sugar. Apart from Singapore, China has also launched a labeling trial that is almost the same as Singapore, which is known as the "traffic light" labeling technique for sweet food and drink products that contain sugar. The Shanghai Municipal Center for Disease Control and Prevention (SCDC) has implemented a nutritional information labeling scheme, especially sugar content information, which is similar to Singapore (Nutri-Grade) and is called营养选择(nutritional options). Almost the same as Singapore's Nutri-Grade scheme, this labeling scheme contains information on the nutritional value of the product so that the dark green "A" label is the most recommended food and beverage product and the least recommended is the red label with the "D" label. Apart from Indonesia, Singapore and China, countries in the European Union have also implemented a labeling system for food and beverage products such as France, Germany, Belgium, the Netherlands, Luxembourg, Spain and Switzerland (Kumala, 2017). However, there are several countries that oppose the use of nutritional information labels, such as Italy, the Czech Republic, Greece, Hungary, Romania and Latvia, based on various backgrounds such as affecting the product labeling system that is currently competing to the detriment of several food products such as traditional food.

The application of nutritional value information labels in each country has the same goal, namely to make people aware as consumers of the consequences of consuming food and beverage products aimed at avoiding excess sugar, fat and other negative contents (Muhammad et al., 2023). The provisions for this nutritional value information table are used by every country, especially in Indonesia, which is part of the regulations of the Food and Drug Monitoring Agency which apply to all verified food and beverage products. Even though Indonesia has regulations that require the inclusion of nutritional value information labels on food and beverage products, based on the results of a study by the National Consumer Protection Agency, it is stated that only 6.7% of consumers in Indonesia pay attention to nutritional value information labels on food and beverage products that will be consumed (Riandani et al., 2023). This is caused by several interrelated factors such as: (1) Lack of public awareness and knowledge, weak literacy and education in understanding nutrition labels which are still not intensive and evenly distributed in society. The majority of consumers do not realize the importance of nutritional value information for health. On the other hand, nutritional value information in food and beverage products uses scientific terminology that is difficult for lay people to understand, so many people feel confused and end up ignoring the nutritional value information (Dewi et al., 2023).

(2) Consumptive Habits and Culture. The majority of people tend to choose food and beverage products based on taste, price and attractive packaging rather than considering their nutritional content. In addition, advertising and promotions from food and beverage product manufacturers tend to emphasize taste and price aspects rather than information on the nutritional value contained in food and beverage products (Susilo & Rizqi, 2023). (3) Limitations of Regulation

and Law Enforcement. Even though there are regulations, not all producers comply with the rules for including good and correct nutritional value information labels. There are still many products with nutritional value information labels that do not meet standards and violate regulations that are still circulating in the community. Apart from that, supervision and legal enforcement of violations of nutritional value information labeling regulations still need to be improved (Hariansyah et al., 2019). And (4) Economic and Social Impact, the majority of people as consumers focus more on and consider cheap prices than nutritional content, especially among low-income communities. In addition, busy lifestyles make many people prefer practical food and drink products without analyzing the nutritional value information contained therein (Rosyid et al., 2019).

Therefore, through comparative studies with other countries such as America, China and Singapore, the Indonesian government can consider implementing practical sugar content labels based on strata/levels to make it easier for people to choose and find out the nutritional value of the intended food and beverage products. This strategy/step is revolutionary and very relevant as a solution to the high level of obesity and diabetes mellitus in Indonesian society. By adopting the use of nutritional value information labels in food and beverage products and forming policies to reduce sugar consumption in society, this is an urgency that must be done immediately to prevent the high number of diabetes mellitus sufferers which currently not only attacks adults but has also attacked children. as the nation's next generation. In addition to the policy of using nutritional value information labels based on strata/levels, a policy is needed that regulates the application of excise taxes on food and beverage products containing sweeteners. There are several countries that have implemented excise taxes on the sweetened food and beverage industry so that people as consumers can meet their needs and improve their health. The main aim of taxes on the sweetened food and drink industry is to limit consumption of food and drinks that contain high levels of sugar so that national health can be maintained. There are around 49 countries that have implemented tax regulations on sweetened foods and drinks, including Mexico, England, South Africa, Portugal, Chile, the United States, Malaysia, the Philippines, Spain and Hungary, etc.

The policy of implementing taxes on sweetened foods and drinks has actually been pushed by several groups and has received a positive response from the legislative body in 2020 and 2022, through Presidential Regulation No. 130 of 2022, packaged sweetened drinks are focused on becoming an excise tax by setting excise revenue targets. from packaged sweetened drinks amounting to IDR 3.08 trillion. However, this type of excise tax on packaged sweetened drinks is still new and does not have complete enough regulations, so further study is needed and its implementation is not possible if it is not accompanied by socialization and education for the public from an early age. Therefore, a combination of these two steps, namely the application of nutritional value information labels based on strata/levels and the imposition of excise taxes on sweet food and drink products, is urgently needed and becomes legal responsiveness to protect the public as consumers and increase the level of national health in order to realize a golden Indonesia.

CONCLUSION

The proliferation of sweetened foods and drinks with high sugar content in Indonesia is one of the causes of the drastic increase in the number of sufferers of non-communicable diseases such as diabetes mellitus, which not only attacks adults but also children as the next generation. Apart from Indonesia, there are also several other countries that are fighting the high growth of diabetes mellitus, such as China, America, Singapore and several other countries. Each country has regulations and strategies for preventing diabetes mellitus through controlling sweetened and high-sugar food and beverage products, namely the use of nutritional value information labels based on strata/levels which makes it easier for the public as consumers to know and choose healthy food and beverage products. Apart from the use of nutritional value information labels, there are several countries that apply excise taxes to the sweetened food and beverage industry.

These two strategies have proven effective in reducing the high number of diabetes mellitus sufferers. Therefore, through the results of a comparative study of food and beverage prevention and control strategies between countries, a combination of strategies that are effective and reflect the responsiveness of the law in protecting the public as consumers from all threats of health problems arising from food and beverage products consumed daily have been found. . The Indonesian government can implement these strategies to prevent an increase in the number of diabetes mellitus sufferers from an early age and can improve the level of national health towards a golden Indonesia.

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