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Sin Taxes' Impact on Consumption, Revenue, and Health: A Systematic Review in the Philippines

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Abstract

The Philippines implemented Republic Act 10351, also known as the Sin Tax Reform Act of 2012 to reform the excise tax on potentially harmful goods such as tobacco, alcohol, sugar-sweetened beverages (SSBs), etc. This paper aims to assess and review the impact of the Sin Tax Law (STL) in the Philippines and to contribute to the analysis of its effects on these three endpoints: Consumption, the government's revenue generation, and overall public health. This research employs a systematic literature review (SLR) to assess the impact of the STL in the Philippines. Relevant literature were gathered from databases such as PubMed, Directory of Open Access Journals (DOAJ), Cumulative Index to Nursing and Allied Health Literature (CINAHL), and Tobacco Induced Diseases (TID). The PRISMA Model was utilized to screen and select appropriate sources. Findings revealed that STL's impact was most apparent in the initial years following its implementation. The consumption of sin goods decreased, but a study on the elasticity of demand for tobacco showed that it is inelastic. The tax revenue collected by the government significantly increased, which is then allocated to health care programs. Additionally, illnesses and deaths caused by tobacco use also declined. However, people will always find a roundabout to avoid being affected by this law by purchasing from illicit markets that arose and thrived a few years after STL implementation. Hence, continuous study is needed to assess STL further and ensure that it still serves its purpose and fulfills its objectives. Ongoing policy adjustments may be required to address market behavior and prevent exploitation of legal loopholes that compromise public health and revenue outcomes.

Keywords: Excise; Philippines; Sin Tax; Systematic Review; Tax

Abstrak

Filipina menerapkan Republic Act 10351, yang juga dikenal sebagai Undang-Undang Reformasi Pajak Dosa tahun 2012 untuk mereformasi pajak cukai atas barang-barang yang berpotensi membahayakan seperti tembakau, alkohol, minuman berpemanis (SSB), dan lain-lain. Makalah ini bertujuan untuk menilai dan meninjau dampak dari Sin Tax Law (STL) di Filipina dan berkontribusi pada analisis dampaknya terhadap tiga hal berikut: Konsumsi, pendapatan pemerintah, dan kesehatan masyarakat secara keseluruhan. Penelitian ini menggunakan tinjauan literatur sistematis (SLR) untuk menilai dampak STL di Filipina. Literatur yang relevan dikumpulkan dari basis data seperti PubMed, Directory of Open Access Journals (DOAJ), Cumulative Index to Nursing and Allied Health Literature (CINAHL), dan Tobacco Induced Diseases (TID). Model PRISMA digunakan untuk menyaring dan memilih sumber-sumber yang tepat. Temuan-temuan menunjukkan bahwa dampak STL paling terlihat pada tahun-tahun awal penerapannya. Konsumsi barang-barang yang mengandung zat adiktif menurun, namun studi mengenai elastisitas permintaan terhadap tembakau menunjukkan bahwa permintaan tembakau bersifat inelastis.

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Pendapatan pajak yang dikumpulkan oleh pemerintah meningkat secara signifikan, yang kemudian dialokasikan untuk program-program layanan kesehatan. Selain itu, penyakit dan kematian yang disebabkan oleh penggunaan tembakau juga menurun. Namun demikian, masyarakat akan selalu menemukan jalan memutar untuk menghindari dampak dari undang-undang ini dengan membeli dari pasar gelap yang muncul dan berkembang pesat beberapa tahun setelah penerapan STL. Oleh karena itu, studi berkelanjutan diperlukan untuk menilai STL lebih lanjut dan memastikan bahwa STL masih berfungsi dan memenuhi tujuannya. Penyesuaian kebijakan yang sedang berlangsung mungkin diperlukan untuk mengatasi perilaku pasar dan mencegah eksploitasi celah hukum yang membahayakan kesehatan masyarakat dan hasil pendapatan.
Kata kunci: Cukai; Filipina; Pajak Dosa; Tinjauan Sistematis; Pajak

INTRODUCTION

Smoking or tobacco use poses as one of the biggest threat on one's health as it is among the top causes of preventable death, illness, and disability globally (World Health Organization, 2023). There are over 112,000 Filipinos each year that die due to tobacco-related diseases, be it tobacco-consumption or secondhand smoke exposure (Institute for Health Metrics and Evaluation, 2023). Non-communicable diseases (NCD), those that cannot be transmitted to others, are the causes of 74% of deaths around the world, such as Ischemic Heart Disease, Stroke, Lung Cancer, Pneumonia, Respiratory diseases, and many others. In the Philippines, diseases the are attributable to the use of tobacco such as Ischemic Heart Diseases were the number one cause of death from 2022 to 2023, with Pneumonia on the fifth spot, and respiratory diseases taking the seventh, eighth, and eighteenth spot in the record of the causes of mortality in the Philippines for 2022 and 2023 (Content | Philippine Statistics Authority | Republic of the Philippines, 2024). Aside from tobacco use, the Institute of Health Metrics and Evaluation identified that deaths of Filipinos attributable to drinking alcohol reached approximately 39,802 in 2019, and the governments spends around Php 200 billion for treatment, regulation, and other expenses related to alcohol incidents (Amul, 2023). The five primary contributors to non-communicable diseases (NCDs) are tobacco use, lack of physical activity, excessive alcohol consumption, poor diet, and air pollution (World Health Organization, 2020). Three of the aforementioned fall under the definition harmful goods that the 2012 Philippines Sin Tax Law (STL) has been wanting to address.

STL aims to reform the taxation on harmful products and promote health improvement, enhance revenue generation, and influence people's behavior regarding consumption of such goods. Before the implementation of STL in 2012, cigarettes and alcohol are affordable and easily accessible, with cigarettes being sold at Php1.00 per piece or even less than that. With the imposition of excise taxes on such goods, especially the cigarettes, consumption decreased from 29.7% in 2009 to 23.8% in 2015, and 19.5% in 2021 (World Health Organization, 2022). STL reduced consumption of tobacco and alcohol in just one year of implementation and increased the government revenues with excise tax collections of around Php 103.4 billion, an increase of 86%, compared to the collection of Php 55.7 billion of the previous year (Kaiser et al., 2016). Use of cigarettes were also cut down and others fully stopped smoking due to the increase of its prices caused by the implementation of STL. This excise tax imposed on tobacco doesn't just change people's behavior on its consumption but it also affects and influences the health and societal costs of its harmful effects such as cancer and heart diseases. The same goes to excise taxes on alcohol and liver diseases (Aslam et al., 2021), and for sugar-sweetened beverages (SSBs) and obesity (Briggs et al., 2013).

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GENERAL DESCRIPTION OF THE COMMUNITY, PROBLEMS AND TARGET SOLUTIONS

General description

This research focuses on evaluating the implementation and outcomes of the Sin Tax Law within the context of the Philippine population, characterized by diverse geographic and demographic profiles, comprising both urban and rural populations with varied access to healthcare services and educational awareness on health risks.

This study includes adult Filipinos affected by the consumption of harmful products such as tobacco, alcohol, and sugar-sweetened beverages. These goods are widely consumed across various income brackets and age groups, making them a significant public health concern. The activities of this research are directed toward understanding how the Sin Tax Law influenced consumer behavior, improved healthcare financing, and contributed to reducing the burden of preventable diseases.

To assess the STL's impact, a systematic literature review was conducted using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) Method. Relevant studies were sourced from PubMed, Directory of Open Access Journals (DOAJ), Cumulative Index to Nursing and Allied Health Literature (CINAHL), and Tobacco Induced Diseases (TID) databases, using search terms such as "sin tax", "effect on consumption", "effect on revenue generation", "effect on health improvement" in the context of the Philippines. The inclusion criteria required studies to address one or more of the three endpoints: consumption, revenue generation, and public health. Studies unrelated to STL, outside the Philippine setting, not in English, or lacking, and other systematic reviews or meta-analyses were excluded. From an initial pool of 423 studies, a total of 5 were qualified for review after applying the selection criteria.

Problem

Though the effect of Sin Tax Law is evident, it doesn't change the fact that the numbers are still high and alarming. A study concluded that the effect of STL is more on the reduction of the consumption rather than the reduction of smokers (Austria & Pagaduan, 2018). Given this, this paper aims to assess or evaluate the discussion gap between STL and its impact on the country. The main objective is to assess and review the impact of Sin Tax Law in the Philippines and to contribute to the analysis of its effects on these three endpoints: Consumption, the government's revenue generation, and the overall public health. This will accentuate the need to actively review the Sin Tax Law to ensure that it abides to its overall objective of promoting better health, improving financial sustainability, and good governance.

Target solution

This research employs a systematic literature review (SLR) to assess the impact of Sin Tax Law in the Philippines. This SLR has considered three endpoints: (1) consumption, where the effect of STL on the demand for potentially harmful goods were examined, (2) revenue generation, where the effect of STL on the ability of the government to generate additional finances for the country, especially the health sector was examined, , and (3) overall public health, where the effect of STL on the general public was examined whether it helped in changing the widespread diseases caused by consumption of potentially harmful goods. The screening process of the studies included in the review was shown in the PRISMA Flowchart (Figure 2). Initially, there are 423 studies found across all databases (PubMed, Directory of Open Access Journals (DOAJ), Cumulative Index to Nursing and Allied Health Literature (CINAHL) and Tobacco Induced Diseases (TID)). By following the inclusion and exclusion criteria, a total of 5 studies were reviewed.

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METHOD

This systematic literature review (SLR) was conducted using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) Diagram to assess the effects of the STL on the three specified endpoints. The PRISMA Diagram (Figure 1) was utilized to screen and review the literature found on selected databases. The following databases were used to search for relevant literature: PubMed, Directory of Open Access Journals (DOAJ), Cumulative Index to Nursing and Allied Health Literature (CINAHL), and Tobacco Induced Diseases (TID). Search terms include: "sin tax" or "effect on consumption" or "effect on revenue generation" or "effect on health improvement" AND "Philippines".

Any studies not related to sin tax, and studies that does not include impacts on consumption, revenue generation, or health improvement are excluded. Non-English sources and low-quality studies, and any studies not situated in the Philippines, and other systematic reviews or meta-analyses are also excluded.

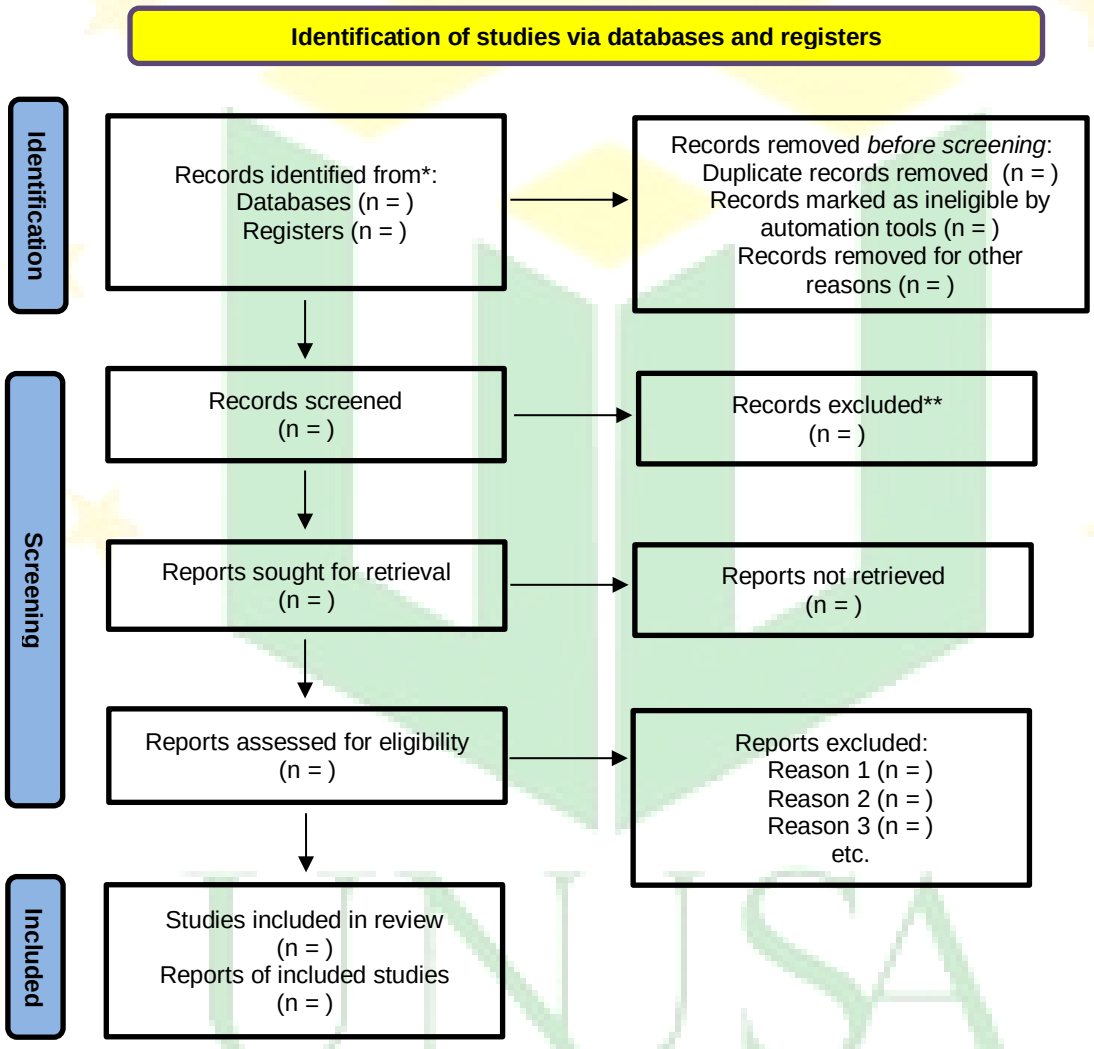

Figure. 1. PRISMA Flowchart Source: (Haddaway et al., 2022)

RESULTS AND DISCUSSION

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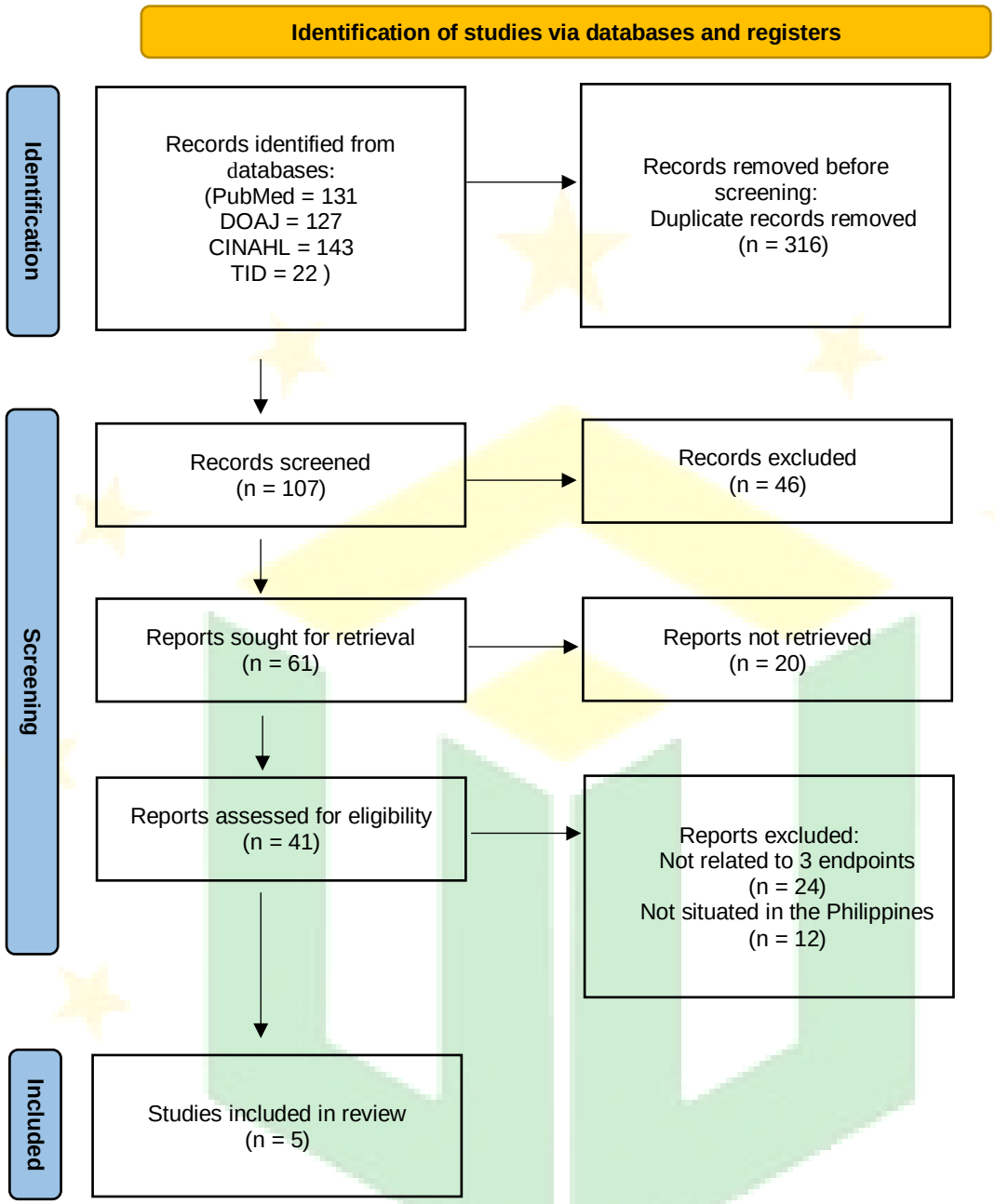

Figure 2. PRISMA Flowchart Result Source: (Haddaway et al., 2022)

1. Effect on Consumption

A study by Cheng & Estrada (2020) suggested that instead of reducing the intensity of smoking, the price increase of cigarettes caused by the implementation of sin tax law in the Philippines in 2012 only contributed in the prevention of smoking initiation. A 10% rise in cigarette prices resulted in a 12.4% decrease in the likelihood of smoking, but it also caused a 1.4%-6.8% rise in the amount of cigarettes consumed. The excise tax on tobacco contributed to a decline in smoking initiation, but it also prompted some smokers to explore alternative methods to minimize costs while sustaining their level of tobacco consumption. Cheng & Estrada (2020) found that cigarette demand in the Philippines is inelastic, which means that prices changes have little effect on the quantity of cigarette people purchase. Their research indicated that a 10% rise in cigarette prices results in a demand reduction between 5.6% to 11%. This relatively means that despite the price

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increase, people would still buy cigarettes even if it is in smaller quantities. Cheng & Estrada (2020) also concluded that a persons socioeconomic status and wealth are associated with the quantity of sticks smoked (Cheng & Estrada, 2020).

In a recent study of Cheng & Estrada (2022), they tested the responses of smokers to the increase in taxes on tobacco. Smokers were then identified into two classes: Potential Quitters (PQ), and Unlikely to Quit (UTQ). 63% of smokers are grouped under PQ. These smokers have either quit, attempted to quit, or considered quitting due to the increase in cigarette costs caused by STL. Conversely, 37% were classified as UTQ. Their response involved seeking cheaper alternatives, such as switching to lower-priced brands or obtaining cigarettes from others. This is likely due to nicotine dependence. Thus, Cheng & Estrada (2022) concluded that STL does have an impact on consumption but increase in price is not the only factor for a smoker's behavioral change (Cheng & Estrada, 2022).

The increased tax on tobacco's main objective is to reduce consumption and prevent smoking initiation. This is identified as the most cost-effective measure as it also helps the government generate additional revenue that are earmarked for health programs and policies to support tobacco farmers and workers (WHO Technical Manual on Tobacco Tax Policy and Administration, 2021). However, as positive as it may sound, it doesn't always equal the reality. The increase in price in tobacco have encouraged the emergence of illicit tobacco on the market. Though these illegal selling of tobacco have been going around since the 90s, legal sales are still dominant as cigarettes are sold cheaper. With the increase in price, people tend to buy from illegal sources. This result does not align with the objective of STL to reduce consumption as people still consume tobacco, just not from the legal sources. Revenue generation was also impeded due to this. STL temporarily increase legal sales in 2013 but decreased in 2014. Illegal cigarette market returned to its previous levels of sales before STL by 2015 (Lavares et al., 2021).

2. Effect on Revenue Generation

Revenue from tobacco taxes increased significantly, rising from PhP 32 billion in 2012 to PhP 70 billion in 2013, and reaching PhP 106 billion by 2017 (Diosana, 2020). This surge in funding has substantially enhanced the national health budget, with a considerable share of the additional tobacco tax revenue being earmarked to healthcare. In just six years, this portion of the budget more than tripled, growing from PhP 50 billion in 2013 to PhP 165 billion in 2019 (Diosana, 2020). This financial support has had a profound impact, allowing the government to provide health insurance to vulnerable groups, particularly the poor and the elderly, without financial barriers. As a result, the national health insurance program has expanded its coverage dramatically, bringing millions more individuals and their dependents under its umbrella. This not only improves access to health services but also promotes overall public health in the country (Diosana, 2020).

3. Effect on Public Health

After the implementation of Republic Act 10351 (Sin Tax Reform Act of 2012), Republic Act 11346 was subsequently enforced. As noted by Cheng & Estrada (2020), this led to an approximate 29% rise in tobacco prices. This study highlights the significant public health benefits of increasing cigarette prices through excise taxes. By making cigarettes more expensive, fewer people may choose to smoke or may quit, leading to a substantial reduction in smoking-related health issues and deaths. The 29% price increase prevent approximately 1,961 deaths related to smoking. Notably, over half of these prevented deaths (58%) were attributed to ischemic heart disease (IHD). In total, these avoided fatalities corresponded to about 34,600 Disability-Adjusted Life Years (DALYs) saved. The government would save around USD 367 million from avoided health care

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costs and increased tax revenues can be reinvested into the health system, enhancing its overall efficiency (Cheng & Estrada, 2021).

CONCLUSIONS AND SUGGESTIONS

Alechnowicz and Chapman (2004) characterized the Philippines as having "the most powerful tobacco lobby in Asia," indicating that the tobacco sector is flourishing in the country (Alechnowicz & Chapman, 2004). The introduction of the Sin Tax Law in 2012 was a significant step for the Philippines, considering its historical context. STL has both positive and negative impacts on consumption, revenue generation, and public health. On the first few years of its implementation, visible changes like decrease on tobacco consumption, increase in tax revenue which increased allocation on health care, and decrease on the number of disabilities diagnosed and death caused by tobacco-related circumstances. However, STL's efficacy declined over time. People can always look for other ways to satisfy their urges. Illicit markets arose which caused legal sales to drop and illnesses caused by untested or not approved goods circulating in the market to soar. Therefore, STL should be reinforced and be reviewed continuously to ensure it still serves its purpose.

This research discussed Sin Tax Law in the Philippines, which is an excise tax on tobacco, alcohol, sugar-sweetened beverages (SSBs), unhealthy food, etc. However, this research only discussed one of the potentially harmful products described on Republic Act 10351, which is tobacco. A study on the effects of other potentially harmful products like alcohol, sugar-sweetened beverages (SSBs), and unhealthy food is needed to better assess the effects of STL. It would be useful to use more databases and include grey literature in future studies.

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