



The Emergence of Online Food Ordering and Its Potential Contribution to Obesity, Diabetes, and Hypertension in Malaysia: A Narrative Review

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Abstract: Introduction: The extensive growth of online food delivery (OFD) services has transformed food purchasing trend in Malaysia. Concurrently, Malaysia continues to experience a rising prevalence of non-communicable diseases (NCDs), particularly obesity, diabetes mellitus, and hypertension. The increasing trend of NCDs raising concerns regarding the potential health implications of digital food consumption patterns. Although a growing number of publications have focused on non-communicable disease in Malaysia, yet there is no review evidence linking digital food ordering with the increasing trend of NCDs. Thus, this paper aimed to link the increase usage of online food delivering system (OFDS) and substantial spike of NCDs. Methods: The current review gathered literature review from databases including Google Scholar, PubMed and Scopus. Relevant studies published in English between 2017 and 2026 were analyzed to examine trends in online food delivery usage and possible associations with NCDs-related health outcomes in Malaysia. Results: The present review suggests frequent use of OFD services has been associated with greater intake of sugar-sweetened beverages, fast foods, and highly processed meals, potentially promoting excessive caloric consumption and sedentary lifestyles. These dietary habits may associate with elevated blood pressure, weight gain and insulin resistance. Conclusion: The substantial growth of OFD represents a significant change in Malaysia's food environment with potential implications for long-term public health. The current evidence suggests a possible link between increasing OFD utilization and the growing burden of diabetes, obesity, and hypertension. In future, further population-based studies are needed to assess public health impact and suggest preventive measures against NCDs progression. Policymakers should consider implementing digital food environment regulations, including nutritional transparency, restrictions on unhealthy food marketing, and promotion of healthier food options on delivery platforms, to reduce NCDs risks and healthcare burdens in Malaysia.

Keywords: Digital food ordering, hypertension, Malaysia, non-communicable diseases, obesity, online food delivery, type 2 diabetes mellitus

INTRODUCTION

The internet and e-commerce industry have experienced rapid growth worldwide in recent years, including in Malaysia. Online food delivery (OFD) services has expanded significantly in Malaysia since the onset of Covid-19 pandemic (Li et al., 2020). Previous studies have

identified a range of factors influencing consumer preference toward online food delivery services that includes technology adoption and an increasing dependence on meals consumed outside the home (Alalwan, 2020; Lee et al., 2019; Roh and Park, 2019). Collectively, these developments have shaped a food environment in which energy-dense and unhealthy foods are readily available and easily accessible. The growing integration of fast-food outlets, restaurants, hawker establishments, and convenience stores with online food delivery platforms has created a highly accessible food environment in Malaysia. The rapid expansion of online food delivery services (OFDS) has transformed food acquisition practices by enabling consumers to conveniently access and order meals through digital platforms, thereby influencing dietary behaviors and nutrition-related health outcomes (Jia et al., 2024). Evidence indicates that the foods available and promoted on OFDS are predominantly energy-dense and nutrient-poor, raising concerns regarding the healthiness of the digital food environment and its potential contribution to unhealthy dietary patterns (Mahawar et al., 2022; Jia et al., 2024).

National Health and Morbidity Survey (NHMS) 2023 discovered that the prevalence of major non-communicable diseases (NCDs) and related risk factors among Malaysian adults remains high, with 54.4% classified as overweight, 29.2% with hypertension and 15.6% with diabetes. Between 2011 and 2023, the incidence of diabetes and obesity increased steadily. Despite this linear rise in cases, hypertension remained highly prevalent, representing a substantial ongoing public health challenge.

Beyond its health impact, the rising cases of NCDs contributes significantly to the economic burden on Malaysia's as their long-term management requires continuous expenditure on medications, routine monitoring, and treatment of disease-related complications (Kamaruddin et al., 2024). In Malaysia, it was estimated that continuous expenditure of medication, routine monitoring and treatment of disease related complications for NCDs, exceeded RM 9.65 billion annually. Furthermore, a more recent NCDs related case estimated that the overall economic burden of NCDs reached RM64.2 billion in 2021, including RM12.4 billion in public healthcare costs and RM51.8 billion in productivity losses (Ministry of Health & WHO, 2022; WHO, 2024). These findings highlight that the long-term management of diabetes and its associated complications requires significant healthcare spending diverting funds that could otherwise be invested in sectors critical to national growth, such as education, manufacturing, and infrastructure development. Hence, preventive measures that promote healthier dietary habits by reducing exposure to unhealthy food environments may improve overall health outcome and reduce healthcare expenditure associated with NCDs treatment (Kamarudin et al., 2024). In view of the health and economic burden associated with NCDs, it is important to identify the emerging dietary factors that may contribute to their increasing prevalence. While the prevalence and health consequences of NCDs have been widely explored, limited attention has been given to the role of OFDS as a potential contributor to this growing public health burden. To address this gap, the present review explores the evidence linking the increasing use of online food ordering with rising burden of NCDs.

THE EMERGENCE OF THE DIGITAL FOOD ENVIRONMENT

The Internet and e-commerce industry have been expanding at its fastest speed recently. There have been a lot of changes in the traditional performance of doing tasks and jobs,

with the emergence of mobile e-commerce, that includes food and beverages industry. Consumer food choices on these platforms are frequently encouraged by digital marketing strategies, including advertisements, product placement, and promotional campaigns designed to influence food purchases (Jia et al., 2024; Gupta et al., 2025).

Furthermore, free-delivery promotions, discounts and bundle deals have been shown to increase the ordering of less healthy food options, particularly energy-dense foods (Jia et al., 2024). Collectively, these characteristics of the digital food environment may influence dietary behaviours and potentially increase the prevalence of NCDs (Jia et al., 2024).

In the Malaysian context, it had been reported that 79% of commonly available beverages and 65% of commonly available foods in food delivery platforms were classified as less healthy based on nutrient profiling scores (Chin et al., 2025).

The limited option of healthier food on OFD platforms, combined with the emphasis on convenience, may encourage consumers to select less healthy foods. In addition, the absence or limited availability of nutrition information, such as front-of-pack labelling, nutrition health claims and information may affect decision-making, thus may promote less healthy dietary patterns among consumers.

NON-COMMUNICABLE DISEASE

Over recent decades, many low-and middle-income countries have undergone a rapid nutrition transition, characterized by substantial changes in dietary patterns, food environments and lifestyles alongside increasing rates of overweight and obesity. This transition generally involves a shift from traditional dietary patterns towards more Westernised or globally influenced diets, accompanied by urbanisation and rising food availability. These socioeconomic and environmental changes have contributed to greater consumption of energy-dense, processed foods and beverages and have been associated with an increasing burden of diet-related non-communicable diseases (Popkin, 2020).

Malaysia has experienced a similar nutrition transition, driven by rapid economic development and urbanisation. Changes in food supply and dietary patterns have included increased availability of wheat, sugar and sweeteners. These changes have occurred alongside a growing prevalence of obesity and other diet-related NCDs (Goh et al., 2020).

The increasing adoption of online food delivery services (OFDS) has generated public health concerns because these platforms provide easy access to meals that are often high in calories, sodium, saturated fat, and portion size, potentially encouraging excessive energy intake and unhealthy dietary behaviours (Stephens et al., 2020; Keeble et al., 2020). Consequently, the growing reliance on digital food delivery applications may contribute to the worsening obesity epidemic, which is recognised as one of the most significant global public health challenges (World Health Organization WHO, 2024). In Malaysia, the burden of obesity continues to rise. Between 2011 and 2023, Malaysia experienced a substantial increase in overweight and obesity and an overall increase in diabetes prevalence, whereas hypertension remained persistently high but demonstrated a relatively stable or slightly declining trend. Data from the National Health and Morbidity Survey (NHMS) 2023 showed that 32.6% of adults were overweight and 21.8% were obese, resulting in a combined prevalence of 54.4%, indicating that more than half of Malaysian adults are affected by

excess body weight. Furthermore, the prevalence of obesity has increased steadily from 15.1% in 2011 to 21.8% in 2023, highlighting a persistent upward trend in the country (Table 1). Beyond the high prevalence of diagnosed disease, IPH 2024 also revealed a substantial proportion of undiagnosed cases, with 5.9% of adults having previously unrecognised diabetes and 11.9% having undiagnosed hypertension, indicating that the actual burden of metabolic disease in Malaysia may be considerably higher than currently perceived. Of particular concern is the increasing prevalence of abdominal obesity, which rise from 45.4% in 2011 to 54.5% in 2023, reflecting a growing accumulation of cardiometabolic risk among Malaysian adults. In addition to obesity, diabetes and hypertension, hypercholesterolaemia affects approximately one-third of Malaysian adults, further compounding the growing burden of cardiovascular risk factors in the population (NHMS, 2023).

Table 1: Non-communicable disease trend in from 2011 to 2023

Condition	2011	2015	2019	2023	Overall trend
Diabetes	11.2%	13.4%	18.3%	15.6%	Increase
Hypertension	32.6%	30.3%	30.0%	29.2%	Plateau
Overweight + obesity	44.5%	—	—	54.4%	Increase
Obesity alone	—	—	—	21.8%	Increase
Abdominal obesity	45.4%	—	—	54.5%	Increase

Diets rich in highly inflammatory foods, including sugar-sweetened beverages (SSBs), processed meats, refined grains, and ultra-processed foods that are commonly available through OFDS platforms, have been associated with elevated levels of systemic inflammation and a higher risk of chronic diseases. Specifically, individuals consuming the most pro-inflammatory diets were reported to have a 46% increased risk of cardiovascular disease and a 28% higher risk of stroke compared with those consuming less inflammatory diets (Shivappa et al., 2018). IPH 2024 also reported 29.9% of Malaysian adults were physically inactive. The nutritional consequences of OFDS may be further exacerbated by low physical activity levels, with almost one-third of Malaysian adults reported to be physically inactive.

POTENTIAL PATHWAY TO DISEASE

The increasing trend of non-communicable diseases (NCDs) in Malaysia emphasize the urgent need to address emerging dietary risk factors and food environments. Recent IPH reports revealed that the prevalence of hypertension (29.2%) and diabetes (15.6%) remain high, while obesity continues to rise among Malaysian adults. These figures exceed or remain above the targets outlined in the National Strategic Plan for Non-Communicable Diseases 2016-2025. This emphasize the need for effective public health interventions and ongoing monitoring of potential risk factors (Ministry of Health Malaysia, 2016; Institute for Public Health, 2024).

Digital food marketing influences the changing food environment, increasing the risk of disease. Social media have become main platforms for food promotion, especially for foods and beverages high in sugar, fat, and salt. Current evidence showed that such influence extends beyond adults to children and adolescents through advertisement,

influencer marketing, and promotional videos (Kelly et al., 2019; Coates et al., 2022). Hence, children may be easily influenced by digital food marketing and may subsequently develop unhealthy food preferences. This might contribute to increase consumption of energy-dense foods, and poor dietary habits (Kelly et al., 2015).

These dietary changes may promote to increase in caloric intake and obesity which are thereby elevating the risk of hypertension, diabetes mellitus, hypercholesterolemia, and cardiovascular disease (Swinburn et al., 2011; Popkin, 2020). Furthermore, the widespread availability of unhealthy foods choices through OFDs may increase the prevalence of obesity-related NCDs, especially among younger individuals who are highly engaged with digital technologies.

Over time, sustained intake of such foods can lead to excessive energy intake and fat accumulation. This may cause adipocyte hypertrophy that promotes the secretion of pro-inflammatory cytokines, including tumour necrosis factor-alpha (TNF- α), interleukin-6 (IL-6), and C-reactive protein (CRP), contributing to chronic low-grade inflammation, insulin resistance, endothelial dysfunction, and cardiometabolic disease development (Hotamisligil, 2017; Shivappa et al., 2018).

ECONOMIC AND HEALTHCARE BURDEN OF DIET-RELATED NCDs IN MALAYSIA

Diet-related non-communicable diseases (NCDs), such as hypertension, diabetes, cardiovascular diseases, obesity, and certain cancers, remain as a major public health challenge in Malaysia. The increasing number of this cases has resulted in substantial healthcare expenditures, involving hospital admissions, outpatient consultations, medications, diagnostic investigations, and long-term disease management (WHO, 2022). Ministry of Health Malaysia and the World Health Organization estimated that NCDs accounted for an economic burden of approximately RM64.2 billion in 2021, equivalent to 4.2% of Malaysia's gross domestic product (GDP). Of the total economic burden, RM12.4 billion was attributed to direct healthcare expenditures, while RM51.8 billion resulted from productivity losses (WHO, 2024).

The growing economic impact is largely driven by the rising prevalence of obesity, diabetes, and hypertension among Malaysian adults. According to the National Health and Morbidity Survey (NHMS) 2023, 15.6% of adults had diabetes, 29.2% had hypertension, and 54.4% were overweight or obese, highlighting the substantial burden of chronic diseases within the population (Institute for Public Health [IPH], 2024; Mat Rifin et al., 2025). Moreover, high cases of obesity among children and adolescents showed that the burden of NCDs may continue to rise in future, resulting in greater healthcare demands and economic consequences. Early onset of unhealthy dietary habits increases the chances of developing type 2 diabetes, hypertension, and cardiovascular diseases in future (IPH, 2024; Chua et al., 2024).

In the context of the rapidly expanding digital food environment, the easy accessibility of nutrient-poor and calorie-dense foods through OFDs may further contribute to unhealthy dietary behaviours and increase the future burden of NCDs. Preventive interventions that promote healthier dietary choices can yield significant health and economic benefits through reductions in healthcare costs and minimizing productivity losses (WHO, 2024; Jia et al., 2024).

STRATEGIES FOR MITIGATING THE HEALTH RISKS OF ONLINE FOOD DELIVERY SERVICES

As OFDs become increasingly integrated into daily life, comprehensive interventions are needed to support healthier food choices and reduce the risk of non-communicable diseases (NCDs) (Osaili et al., 2023; UNICEF, 2023). The Ministry of Health and non-governmental organizations (NGOs) should organize nutrition literacy campaigns to improve consumers' awareness of interpreting nutrition labels, identifying hidden sugars and excessive sodium content in meals, practicing portion control, and making healthier choices when ordering food online (Fuchs et al., 2022; FDA, 2023). Such initiatives can assist consumers in making healthier food choices when using digital food platforms (Osaili et al., 2023; Fuchs et al., 2022).

Educational institutions such as universities also play a crucial role in shaping lifelong dietary behaviours through nutrition education and health promotion activities (Osaili et al., 2023). Schools and universities should incorporate nutrition education programmes that emphasize healthy online food selection, budget-friendly nutritious meal practices, and the health risks associated with frequent consumption of fast foods and energy-dense meals (Osaili et al., 2023; Agrawal et al., 2025).

At the individual level, behavioural habits should be promoted to support healthier purchasing decisions on online food delivery platforms (Osaili et al., 2023). Before placing an order, consumers should be encouraged to review available nutritional information, compare healthier alternatives, and avoid ordering when excessively hungry, as hunger may increase impulsive food choices (Wang et al., 2025; Cornelsen et al., 2025). During ordering, healthier modifications such as adding vegetables, selecting grilled rather than fried foods, choosing water instead of sugar-sweetened beverages, and avoiding meal upsizing should be promoted (Osaili et al., 2023). In addition, consumers should monitor their use of food delivery applications and increase the consumption of home-prepared meals (Osaili et al., 2023).

Collectively, these community, educational, and individual interventions may help reduce the negative health impacts associated with the growing digital food environment and reduce the prevalence of obesity, diabetes, hypertension, and other diet-related NCDs (UNICEF, 2023; Osaili et al., 2023). In order to reduce the potential health risks associated with the growing use of OFD platforms, several public health and policy interventions may be considered in Malaysia (UNICEF, 2023). Food delivery platforms should be required to provide transparent nutritional information for all menu items, including calorie, sodium, sugar, and saturated fat content (Cornelsen et al., 2025; Xiao et al., 2024). This information can enable consumers to make more informed dietary choices (Wang et al., 2025; Fuchs et al., 2022).

Regulations that promote healthier food environments within digital platforms, such as prioritizing healthier menu placement and restricting the promotion of energy-dense, nutrient-poor foods and sugar-sweetened beverages, should also be considered (UNICEF, 2023; Driessen et al., 2025). In addition, OFD applications such as GrabFood, Foodpanda, and ShopeeFood could incorporate healthier default options by displaying lower-sodium, lower-calorie, and high-fiber meals more prominently in search results and recommendations (Fuchs et al., 2022). A traffic-light nutrition labelling system using colour-coded indicators (green for healthy choices, yellow for moderate options, and red for foods

high in fat, sugar, or sodium) could provide rapid nutritional assessment and facilitate healthier purchasing decisions (Cecchini & Warin, 2016; Zhang et al., 2020; Liu et al., 2025). With the increasing integration of artificial intelligence (AI) into digital food environments, OFD platforms may provide additional opportunities to promote healthier eating behaviours through personalized dietary recommendations, healthier food substitutions, increased promotion of fruits and vegetables, and reduced repetitive marketing of unhealthy food items (Agrawal et al., 2025). Collectively, these interventions have the potential to create a healthier digital food environment and contribute to the prevention of hypertension, obesity, diabetes, and other diet-related NCDs in Malaysia (UNICEF, 2023; Agrawal et al., 2025).

As digital food environments continue to expand, a combination of policy regulation, nutrition education, and individual behavioural changes will be essential to ensure that the convenience of OFDs does not adversely affect population health in Malaysia (UNICEF, 2023; Osaili et al., 2023).

GOVERNMENT POLICIES AND REGULATORY RESPONSES

In response to the growing burden of obesity and diet-related NCDs, Malaysia has implemented several population-level policy interventions aimed at promoting healthy dietary behaviours and creating healthier food environments. One of the policy introduced is Sugar-Sweetened Beverage (SSB) Tax implemented in July 2019, which imposed excise duties on selected beverages containing sugar above specified thresholds. The main objectives of this policy were to reduce sugar consumption in production and promotes healthier beverage choices (Ministry of Finance Malaysia, 2019; Ministry of Health Malaysia, 2023).

In addition, the Ministry of Health Malaysia had introduced the Healthier Choice Logo (HCL) programme to assist consumers in identifying healthier food and beverage options from the front-of-pack nutrition labelling designed. The programme also encourage manufacturers to reformulate products to meet nutritional criteria established by the Ministry of Health. Reports from the Ministry indicate that, following the implementation of the SSB tax, many beverage manufacturers reformulated their products to reduce sugar content, thereby qualifying for HCL certification (Ministry of Health Malaysia, 2023).

At the national level, Malaysia's efforts to address nutrition-related NCDs are guided by the National Plan of Action for Nutrition of Malaysia (NPANM III) 2016-2025 and the National Strategic Plan for Non-Communicable Diseases (NSP-NCDS) 2016-2025. These policy frameworks encourage multisectoral approaches to improve dietary quality, increase physical activity, reduce obesity, and strengthen prevention and early detection of chronic diseases. The primary objectives are to reduce the incidence and impact of hypertension, obesity, diabetes, cardiovascular diseases and other NCDs among the Malaysian population (Ministry of Health Malaysia, 2016a; Ministry of Health Malaysia, 2016b).

Furthermore, regulatory had emphasized on strengthening nutrition labelling practices and improving consumers' access to nutrition information. Mandatory nutrition information panels, together with front-of-pack nutrition guidance such as the healthier choice logo, aim to provide essential nutrition information during purchasing. Malaysia has also introduced guidelines to limit children's exposure to the marketing of foods and

beverages high in sugar, salt and fat by regular monitoring of the food promotion that can influence dietary preferences among children (World Health Organization, 2022; Ministry of Health Malaysia, 2023).

Despite these efforts, important policy gaps remain. Existing food and nutrition policies were largely developed within conventional retail and physical food environments. However, the rapid growth of online food delivery services (OFDS) has created new digital food environments characterized by extensive marketing, influencer promotion, targeted advertising, personalized recommendations, and frequent price discounts. These strategies may increase exposure and consumption of, energy-dense and nutrient-poor foods. Consequently, there is an essential need to emphasize and strengthen the policies and regulatory frameworks related to food marketing practices, promotional strategies, and the availability of unhealthy foods within digital food delivery platforms (Kelly et al., 2015; Stephens et al., 2020).

MALAYSIA IN THE CONTEXT OF GLOBAL FOOD ENVIRONMENT TRANSITIONS

Malaysia's experience with online food delivery services (OFDS) mirrors a broader regional shift towards digitally mediated food purchasing across Asia. Rapid urbanisation, widespread smartphone adoption, increasing internet connectivity, and the expansion of platform-based economies have accelerated the use of food delivery applications throughout the region. Although the popularity of OFDs is a common phenomenon, the scale of adoption, nutritional implications, and policy responses vary across countries according to differences in digital infrastructure, consumer behaviour, food environments, and public health priorities (Stephens et al., 2020). Table 2 demonstrates that the rapid growth of online food delivery services is a common phenomenon across Asia, driven primarily by urbanisation, digitalisation, convenience, and changing consumer lifestyles.

Table 2: Online food delivery services in some Asian countries

Country	Major OFDS Platforms	Key Drivers of OFDS Adoption	Public Health Concerns	Policy/Regulatory Response	References
Singapore	GrabFood, Foodpanda, Deliveroo	High smartphone penetration, digital connectivity, convenience, urban lifestyle	Potential influence of digital food environments on dietary choices and food purchasing behaviours	Strong nutrition labelling requirements, Healthier Choice Symbol programme, nutrition and health claims regulations, emphasis on informed consumer choice through front-of-pack guidance	Health Promotion Board Singapore (2026); Singapore Food Agency (2026)
Thailand	GrabFood, Foodpanda, LINE MAN	Urbanisation, smartphone use, changing lifestyles, convenience	High availability of foods containing excessive sodium, sugar and fat through OFDS; concerns regarding	Calls for nutrition-sensitive interventions, nutrition information display on OFDS platforms, and healthier-food filters to assist consumers	Jindarattanaporn et al. (2023)

			unhealthy food choices		
Indonesia	GoFood, GrabFood, ShopeeFood	Large digital economy, convenience, promotional discounts, urbanisation, time-saving benefits	Concerns regarding the nutritional quality of delivered foods, dietary behaviours, and growing burden of obesity and diabetes	Growing recognition of OFDS as part of the digital food environment, but limited specific nutrition-focused regulations identified in the literature reviewed	Elverda et al. (2025)
South Korea	Baedal Minjok (Baemin), Yogiyo, Coupang Eats	Advanced digital infrastructure, widespread use of mobile payments, strong delivery logistics, convenience culture	Concerns regarding consumption of energy-dense delivered foods and health implications of frequent OFDS use; consumer concerns about healthfulness of delivered meals	Increased emphasis on nutrition awareness, consumer education, and consideration of health impacts within the food delivery ecosystem	Rha et al. (2023)
Malaysia	Foodpanda, GrabFood, ShopeeFood	Urbanisation, smartphone penetration, convenience, affordability, busy lifestyles, COVID-19-related behavioural changes	Increasing concerns regarding access to energy-dense foods, sugary beverages, large portion sizes, obesity, diabetes and other NCDs	SSB Tax (2019), Healthier Choice Logo (HCL), NPANM III, NSP-NCDS 2016-2025; emerging need to address digital food environments and OFDS-specific marketing practices	Institute for Public Health (2024); Ministry of Health Malaysia (2016, 2023)

Despite differences in economic development and digital infrastructure, concerns surrounding the nutritional quality of foods purchased through OFDS have been reported consistently across countries. Singapore has adopted a relatively proactive approach through nutrition labelling and healthier food promotion initiatives, whereas Thailand has generated evidence showing that many foods available through delivery platforms exceed recommended sodium and sugar levels. Indonesia and South Korea similarly report concerns regarding unhealthy dietary practices associated with OFDS use and their potential implications for obesity and metabolic diseases. Collectively, these regional experiences highlight the growing importance of digital food environments as a public health issue and underscore the need for Malaysia to evaluate whether existing nutrition and NCDS policies adequately address food marketing, nutritional transparency, and consumer behaviour within online food delivery platform.

CONCLUSION

Malaysia's rapid nutrition transition and increasing adoption of OFDS have transformed the national food environment and created new challenges for public health. While OFDS offer

greater convenience and accessibility, they may also encourage the consumption of energy-dense foods high in sugar, salt, and saturated fat. At the same time, Malaysia continues to experience a growing burden of NCDs, including obesity, diabetes, hypertension, and hypercholesterolaemia. Evidence from Malaysia and neighbouring Asian countries suggests that digital food environments can influence dietary behaviours through food marketing, promotions, and increased access to unhealthy food options. Although Malaysia has implemented several initiatives, including the Sugar-Sweetened Beverage Tax, Healthier Choice Logo programme, NPANM, and NSP-NCDS, gaps remain in addressing the unique challenges posed by online food delivery platforms. As OFDS continue to expand, further research and evidence-based policies are needed to ensure that digital food environments support healthier food choices and contribute to the prevention of obesity and diet-related NCDs.

Conflict of interest

There is no conflict of interest.

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