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Food Insecurity in Amsterdam Noord: Experiences of Infrastructural Violence in an Urban Food Environment

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Abstract

Urban food insecurity in high-income countries is rising, and its health outcomes and determinants have been well documented. There are, however, limited qualitative, place-based studies of how people become, or remain, food insecure, especially in EU cities. This article introduces infrastructural violence to explore the complexities of food insecurity and its underlying (infra)structural causes in the urban food environment of Amsterdam's northern city district, Noord, since the Covid-19 pandemic. We build on interviews (2023–2024) with 28 food bank users, volunteers, funders and network representatives, social workers, and municipal staff, carried out in a community geography project. Our findings show a complex interplay of food retail, urban development, welfare, and community food bank infrastructures. Key findings are that urban development affects food security in various ways, and that welfare and community food bank infrastructures, which ideally alleviate food insecurity, can, in fact, exclude people from accessing healthy and affordable food and cause additional harms of administrative burdens, fear, and shame. We further trace the identified infrastructures as place-based embodiments of wider structures, variably including: housing marketization, supermarket corporatization, historical relations between residents and the state, welfare bureaucratisation, social service decentralization, and austerity politics. This study illuminates the (infra)structural complexities underpinning food insecurity in a changing urban food environment, and discusses their implications for urban food governance research and policymaking.

Keywords

Amsterdam; community geography; food insecurity; infrastructural violence; structural violence; urban food environment

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1. Introduction

A lack of food security—food insecurity—is on the rise in high-income countries (Davis & Geiger, 2017; cf. Food and Agricultural Organization of the United Nations, 2020). The Food and Agricultural Organization of the United Nations (2024, p. 55) has long defined food *security* as occurring when all people always "have physical, social, and economic access to safe and nutritious food," and distinguishes four food security dimensions: (1) the physical *availability* of such food; 2) people's *physical* and *economic access* to such food; (3) people's ability to *utilize* food that is available and accessible to them; and (4) the *stability* of the first three factors over time. In 2023, 9.5% of the population in the European Union could not afford a proper meal, 1.2% percentage points higher than in 2022 (Eurostat, 2024). This means that more people struggle with an uncertain or limited availability of, or access to, safe and nutritious food (Loopstra, 2018; O'Connor et al., 2016)—important, as food insecurity is connected to a range of observable and experienced physical (e.g., Seligman et al., 2010; Seligman & Schillinger, 2010) and mental health challenges (Frongillo et al., 2017; A. D. Jones, 2017), disproportionally affecting those already living in vulnerable or marginalized situations (e.g., Garthwaite et al., 2015).

Food environment research has mainly studied how limited food availability or physical access to food contributes to food insecurity (Beaulac et al., 2009; see also Fitzpatrick et al., 2016; Jiao et al., 2012). Yet, food insecurity can be caused by various other, notably economic, drivers. This is especially relevant in European cities, where economic rather than physical access affects dietary patterns (Helbich et al., 2017; Shaw, 2006). Even in "food deserts" where food is more sparsely available, cost rather than distance or knowledge can limit access to healthy foods (Alkon et al., 2013). Indeed, income and poverty (Darmon & Caillavet, 2017; Ihab et al., 2015; Sassi, 2018) and unemployment (Frongillo et al., 2017; M. D. Smith et al., 2017) significantly determine food insecurity. Because people in cities are relatively dependent on economic food access (Frongillo et al., 2017; Loopstra, 2018; Ruel et al., 2010; M. D. Smith et al., 2017), they are especially prone to food insecurity (Carter et al., 2014; Tacoli, 2019).

While food unavailability and limited access are now generally well established food insecurity drivers, limited attention has been given to their place-based manifestations and/or exacerbations, i.e., those related to a particular location, like a neighbourhood or city district (D. Smith & Thompson, 2022). For example, if a cost of living crisis already impacts economic food access, more "downstream barriers," like social service opening hours or interpersonal relationships between service recipients and social workers, can further restrict or affect people's financial means to access food. When studies do focus on food insecurity in a certain place, for instance, a neighbourhood, they tend to be "out-of-focus in relation to critical understanding of food insecurity as a phenomenon that is produced" (Page-Reeves et al., 2017, p. 21) by both large-scale drivers and downstream barriers. So, research on food insecurity, food environments and the city is needed that focuses on the underlying causes of food insecurity within their place-based context (Odoms-Young et al., 2024; D. Smith & Thompson, 2022; cf. Vonthron et al., 2020).

This article thus explores food insecurity and its place-based causes in the northern district of Amsterdam: Noord. Its food environment has been changing since the Covid-19 pandemic, seeing new community food banks emerge, while undergoing (re-)developments and gentrification. Moving away from the literature's methodological and empirical tendencies to focus on the lived experiences of specific food insecure demographics (e.g., Johnson et al., 2020; Lombardozzi et al., 2021), the goal of this article is to qualitatively understand both food insecurity and its causes from the perspectives of diverse stakeholders with (lived)

experiences of how people in Noord become or remain food insecure. We build on semi-structured interviews (2023–2024) with 28 interviewees carried out during the first year of a community geography project. We zoom in on food insecurity as the result of limited availability and access to sufficient nutritious food, and people's subsequent reliance on (local) welfare provision and community food banks.

Theoretically, we build on recent studies that see food insecurity through a "structural violence" lens (Bruck & Garthwaite, 2021; Johnson et al., 2020; Lindberg et al., 2023; Whittle et al., 2015). While the concept brings out how suffering, like food insecurity, and responses to it, like food charity, are structured by wider social arrangements, it has barely been used in European health-related research (Macassa et al., 2021). To address some of its analytical problems, we draw on the related concept of *infra*structural violence—seeing infrastructures as "things" and "relations between things" that can both reflect and reinforce structural violence—which to our knowledge has not yet been applied to food insecurity. This article thus empirically asks: What are stakeholder perspectives on how infrastructures in *Amsterdam* Noord (re)produce food insecurity? In the discussion, we then trace how the identified infrastructures reflect and reinforce wider, inequitable social arrangements—and how they can alternatively be turned into care-full and just infrastructures (Alam & Houston, 2020; Williams, 2022).

2. Food Insecurity as (Infra)Structural Violence

2.1. Structural Violence and Food Insecurity

Structural violence describes how social arrangements, like economic, legal, political, and cultural systems, disproportionally impact people in vulnerable groups and prevent them from attaining justice, wellbeing, and healthy lives (Jackson & Sadler, 2022). These "structures" can be seen as "violent" because they can limit people's ability to meet their basic needs and thus do harm. Coined by Johan Galtung in 1969, it was popularized by anthropologist Paul Farmer who described how social arrangements bring about harms which "are *structural* because they are embedded in the political and economic organization of our social world" and "they are *violent* because they cause injury" (Farmer et al., 2006, p. 1686). Structural violence mainly refers to indirect, invisible, yet omnipresent harms, contrary to physical violence that "shows," and might seem a natural part of the social world (Rylko-Bauer & Farmer, 2017).

Structural violence has been increasingly applied in urban studies, for example, to understand problematic welfare programs (Bruck & Garthwaite, 2021) and state neglect of neighbourhoods (Apostolopoulou & Liodaki, 2025). The concept has, to our knowledge, not been used to study (urban) food environments, but has sparsely been applied to food insecurity. Whittle et al. (2015) examined the structural violence of urban policies in San Francisco stimulating gentrification and neglecting disability facilities, as they contribute to food insecurity, poverty and harmful coping strategies for low-income people with HIV/AIDS. Also in San Francisco, Johnson et al. (2020) studied how insufficient benefits and limited healthy food availability led to food insecurity among formerly homeless young adults, compounded by feelings of shame and stigma. Structural violence has also been used to describe harmful food bank responses to food insecurity: Lindberg et al. (2023, p. 194) studied the "controlling, demeaning and depriving violence practices," such as subjugation, humiliation, and stigmatization, of Australian food banks and social services (see also Bruck & Garthwaite, 2021). To clarify, whereas some (Lindberg et al., 2023; Whittle et al., 2015) see food insecurity as a *manifestation* of structural violence, others (Bruck & Garthwaite, 2021; Johnson et al., 2020) see

food insecurity as a *component* of structural violence. These perspectives do not exclude one another. Here, therefore, we consider food insecurity both a symptom of violent structures and mechanism of associated harms.

Despite possibly helping to "understand the distal causal factors that can plausibly explain…poor health patterns and inequities" (Lindberg et al., 2023, p. 186), structural violence is critiqued for being too broad (Jackson & Sadler, 2022). It often ill-defines "perpetuators" by privileging structures over actors (De Maio & Ansell, 2018), while structures themselves remain abstract (Herrick & Bell, 2022). Especially studies at the "micro" level, such as those on urban food environments, risk abstracting violence (Pavoni & Tulumello, 2024). Indeed, the few studies exploring food insecurity through a structural violence lens tend to offer generalized descriptions of its underlying causes. Whittle et al. (2015), for instance, zoomed in on lived experiences of hunger, anxieties to become hungry, unhealthy diets, and having insufficient disability benefits, while the "violent structures" of widespread urban regeneration and national welfare that the authors identify receive relatively little attention, let alone the mechanisms through which these structures (re)produce violence locally. In the following paragraphs, we thus introduce *infra*structural violence to move from abstract structures to (their) concrete infrastructural manifestations, to make sense of local stakeholder experiences of what drives food insecurity.

2.2. Infrastructural Violence and Exclusive Food Infrastructures

The 'infrastructural turn' in urban theory increased attention to infrastructures sustaining urban living, including food, mobility, water, energy, and digital infrastructures (Graham & Marvin, 2022). The concept of infrastructures has been widely applied to understand "things," the "relationships between things," as well as the processes of both (re)production and violence affected by "things and their relations" (Coutard & Florentin, 2024). In fact, the ability of infrastructures to affirm life is intractably linked to processes of subordination (Kallianos et al., 2023). Aligning with the notion of harmful infrastructures, Rodgers and O'Neill (2012) popularized the concept *infrastructural violence*: the violence of infrastructures that reflect and reinforce structural violence. Where structural violence ill-defines perpetrators, infrastructure is its "instrumentation medium, insofar as the material organization and form of a landscape not only reflect but also reinforce social orders" (Rodgers & O'Neill, 2012, p. 404). So, infrastructural violence does not only describe inevitable infrastructural harm, or how infrastructures materially embody violent structures, but also how infrastructures (actively) exacerbate violent structures (see also Coutard & Florentin, 2024).

While infrastructural violence has to our knowledge not been applied to food insecurity, studies have explored the harms of food and related (urban) infrastructures, without explicitly using the concept infrastructural violence. Urban food infrastructures include production, distribution, retail, and waste disposal (Marsden et al., 2018) that intersect with water, transport, and energy infrastructures, and are intertwined with social and political relationships and ideologies existing at multiple urban scales (Battersby et al., 2024). Food insecurity, then, arises out of the "[i]nadequacies in…access and supply" of these various natural, material and social infrastructures, by "undermin[ing] the ability to safely cook, clean, store, supply, manufacture and grow food, and dispose of or reuse food waste" (Battersby et al., 2024, p. 441).

Food(-related) infrastructures can thus be diverse, and exist at multiple scales. Yet, the few studies that explore such infrastructures, and how their mechanisms could impact food (in)security, are often situated at

the urban level, illustrating how an infrastructural lens can contribute to better understand the local (re)production of food insecurity. For instance, Deener (2017) studied how public-private urban development can create spatially exclusive food distribution infrastructure, and Power et al. (2022) how the uneven distribution of access to (in)formal welfare infrastructures can affect economic access to food. Studies on food banks further point to "infrastructural platforms" in particular cities that underpin food banks, such as funding, volunteers, logistics, and urban policies affecting food bank operations (Mitchell et al., 2025; Williams et al., 2024) and their "social infrastructures" such as networks, trust, and solidarity that link material food bank infrastructures with the people interacting with them (Connelly & Beckie, 2016; Kerstetter et al., 2023).

While studies have thus explored how infrastructures can (re)produce food insecurity, they have often done little to explicate those infrastructures as instrumental mediums of structural violence. Yet, doing so can "provide a productive means through which to talk about society's responsibility for…suffering and its obligation to work towards concrete changes to urban infrastructure for the sake of producing a more just tomorrow" (Rodgers & O'Neill, 2012, p. 407). Bruck and Garthwaite's (2021) come close. They trace how neoliberalism and austerity ("structures") permeate the operations, norms, and management of a food charity. Without explicitly referring to infrastructures, the authors describe what elsewhere have been called *infrastructural platforms*: "rules stemming from economic and bureaucratic pressures" that "can establish barriers to accessing essential material resources"; and *social infrastructures*, relationships that, because of those rules, are fraught with "tension, distrust and anxiety" that food charity visitors must negotiate "to ensure access to resources and garner emotional support" (Bruck & Garthwaite, 2021, p. 157).

We contend that infrastructural violence can be used to study how the place-based embodiments (infrastructures) of broader social arrangements (structures) (re)produce food insecurity. Infrastructural violence thus conceptually sensitizes our empirical analysis to focus on infrastructures, which might, based on the discussed literature, include "food chain infrastructures," "urban development infrastructures," and "welfare infrastructures," and their "infrastructural platforms" and "social infrastructures." We explore whether (or not) and if so how, as "material channels" of structural violence, they (re)produce food insecurity. This perspective supports ongoing calls to "re-localize" policy responses to food insecurity, offering an empirical basis for urban food policies (Sonnino, 2016). Despite their worldwide popularity and ambitions, urban food policies continue to overlook or fail to address food insecurity (Candel, 2014; Filippini et al., 2019; Moragues-Faus & Battersby, 2021; Smaal et al., 2020). Infrastructural violence complements existing explanations of food insecurity focused on its drivers or determinants (e.g., Fyles & Madramootoo, 2016; Warr, 2014) by illuminating the "material distribution of goods and bads that conditions people's access to good food…at the city scale and beyond"—a core gap in urban food policymaking (Moragues-Faus & Battersby, 2021, p. 5).

3. Methodology

3.1. Case Selection

This article was developed as part of the EU-Horizon Europe-funded FoodCLIC project (2022–2027) aiming to "ensure the availability and consumption of healthy, affordable, safe and sustainably produced food" across seven European city-regions, including Amsterdam, the context of our current article (Smolders et al.,

2023, p. 11). The project started with identifying areas in Amsterdam's metropolitan region "with significant proportions of food-deprived and vulnerable groups of people" (Smolders et al., 2023, p. 12). For this, a multi-criteria analysis was created compounding data on household income, self-reported control over life, and obesity, as respective indicators of income, health, and food security (following Simón-Rojo, 2021). Amsterdam Noord was one of the areas where people are most at risk of food insecurity and where the project team, including Jonathan Luger, successfully contacted city district representatives and policy makers early on. So, it became our study area (for an in-depth description of the case selection see Appendix E in Smolders et al., 2023).

3.2. Case Description

Noord housed 108,792 registered people in 2024, about 11.7% of Amsterdam's total population (Gemeente Amsterdam, n.d.). Home to historically working-class, marginalized neighbourhoods, Noord has been undergoing redevelopments. Some neighbourhoods undergo state-led gentrification (Van Gent et al., 2019), often the result of both national housing market liberalisation and, explains del Pulgar (2021), deliberate municipal efforts to turn them into culturally trendy, green urban oases, that together, if not physically, at least socially exclude long-term residents. While healthy, fresh food is overall easily accessible in Amsterdam, Noord's food environment provides significantly less healthy food than other districts in Amsterdam, and unhealthy foods dominate healthy food alternatives (Helbich et al., 2017). Since Covid-19, community food banks in Noord—to support those ineligible for or not willing to receive support from the one formal food aid organization (*Voedselbank*) in Noord (Buurtverbinders, 2023)—rapidly increased. Food banks often serve those who are severely food insecure, while many more might be food insecure (Garratt & Armstrong, 2024; Tarasuk et al., 2020)—this rise in food banks likely reflects increased food insecurity, while not necessarily saying anything about its scale. No clear data on food insecurity in Noord exists. A Dutch study did find that 19% of people in "strongly urbanized areas," compared to 14% nation-wide, lives with food insecurity (Veldkamp & van der Hoeve, 2024), and that 52% is caused by food unaffordability; significant, as the municipality appointed 16 out of 35 neighbourhoods in Noord as "development neighbourhoods" with a relatively high number of people living with low socio-economic positions compared to the rest of the city (Gemeente Amsterdam, 2021a). Furthermore, 14–16% of people in Noord live in so-called financially "vulnerable situations," higher than Amsterdam's 11% average (Gemeente Amsterdam, 2022), and 20.6% of households in Noord live below the municipal poverty line, 3.9% percentage points above Amsterdam's average (Gemeente Amsterdam, 2023).

3.3. Data Collection and Analysis

Data collection was organized as part of a community geography project in Noord initiated by FoodCLIC. The project team partnered with, and now funds, a network of community food banks over the course of 2023–2026 (Buurtverbinders, 2023). Community geography sees knowledge production as a process that should involve partnerships between researchers and various local stakeholders (Fischer et al., 2022; Shannon et al., 2021). FoodCLIC thus aligns with D. Smith and Thompson's (2022, p. 100) call for community geography, to "help avoid and remedy some of the recruitment and ethical challenges" that food insecurity research can encounter. The "community" of our research project consists of people involved with the community food bank network, including food bank volunteers and coordinators (all of which are residents of Noord, most of which experienced food insecurity), community workers, social workers, NGO directors,

benefits advisors, and local policymakers (some of which are residents of Noord, all of whom work in Noord). Data collection thus followed steps similar to the ones proposed by D. Smith and Thompson for qualitative place-based research on food insecurity, including both people with lived experiences of food insecurity and other stakeholders (see also Milbourne, 2024). We used snowball sampling to find interviewees (Noy, 2008), expanding the heterogenous group of participants to 28 to guarantee saturation (cf. Hennink & Kaiser, 2022). All interviews were conducted in Dutch, recorded on a portable recorder, stored on password-protected storage, and transcribed. Following the Code of Ethics of our faculty, no ethical review was needed for the research presented here (Vrije Universiteit Amsterdam, 2019). Informed consent forms outlining research objectives, data handling, and interviewee rights were presented to and signed by interviewees prior to interviews.

We first "focused on the food," following D. Smith and Thompson (2022), by developing a map of Noord showing five food environment dimensions (López Cifuentes & Sonnino, 2024): agri-food, retail, hospitality, community, and institutions (for the map see Smolders et al., 2023, p. 55). The map functioned as visual aid in the first interview round (June 2023, interviews 1–15, see Table 1) that "focused on the people" with experiences of food insecurity and those further up the "ladder of support." Core guiding interview questions were: (a) How is food insecurity experienced in Noord?; (b) What causes food insecurity in Noord?; and (c) What are possible solutions to food insecurity in Noord? It soon became clear that food insecurity for undocumented people is experienced differently from documented people, because the former do not receive the same (food) assistance as legal residents (Carney & Krause, 2020). Whereas most community food banks in Amsterdam predominantly serve undocumented people (Kriek & Mack, 2022), interviewees estimated that around four out of five recipients in Noord are documented. As such, Noord's case provides unique insights into food insecurity of documented people. The second interview round (September 2023—April 2024, interviews 15–30, see Table 1) focused on emerging themes relevant to documented residents only. Data further included fieldnotes from JL attending a community food bank network meeting (May 2023), a municipality event for community food banks (October 2023), and volunteering (distributing food parcels, cooking dinners) at three community food banks (June 2023). We substantiated empirical findings by drawing from municipal policy documents and statistics.

Based on our main question, data analysis was guided by two sub-questions: (a) How is food insecurity experienced by diverse stakeholders in Noord and (b) how do these stakeholders perceive the role of existing infrastructures in shaping food insecurity? We used Atlas.TI 25 following Braun and Clarke's (2006) thematic analysis that uses coding for theme development, while acknowledging analysis as an "inherently interpretive practice" (Braun et al., 2022, p. 2). First coding inductively, JL distilled (sub)themes on experiences of food insecurity and the infrastructures that (re)produce it, and built a codebook (see Supplementary File) used for a second round of deductive coding. This formed the basis for four result sections describing thematic pathways of how infrastructures cause or exacerbate food insecurity and/or other forms of harm in Noord. Marjoleine van der Meij contributed as "critical friend" (Erwee & Conway, 2006), ensuring conceptual, methodological and analytical clarity. We checked our preliminary findings at a FoodCLIC event in Noord (December 2023) and discussed our draft manuscript with the lead researcher of the community geography project (March 2025) and a neighbourhood representative who has, for years, been working closely with the community food banks, municipal officers, and social welfare organisations we interviewed (April 2025). Based on this round of verification, our findings were both confirmed and enriched.

Table 1. Overview of interviewees.

Interview number	Affiliation/experience of interviewees	Interviewee abbreviations	Interview date
1	Community food bank; experienced food insecurity	CFB1	June 2023
2	Community food bank; experienced food insecurity	CFB2	
3	Community food bank; experienced food insecurity	CFB3	
4	Community food bank; experienced food insecurity	CFB4	
5	Community food bank; experienced food insecurity	CFB5	
6	Community food bank	CFB6	
7	Community food bank	CFB7	
8	Local food producer	FP1	
9	Formal food bank	FFB1	
10	Formal food bank	FFB2	
11	Social welfare organisation	SW1	
12	Social welfare organisation	SW2	
13	Public health NGO	NGO1	
14	Municipality district department Noord	MN1	
15	Municipality of Amsterdam	MA1	
16	NGO facilitating a community food bank network Noord	NGO2	September 2023
17	Food aid distribution NGO	NGO3	
18	Community food bank	CFA8	October 2023
19	Social welfare organisation; community food bank; experienced food insecurity	SW3	
20	Social welfare organisation	SW4	
21	Social welfare organisation; formal food bank	SW5; FFB3	
22 (second interview with SW2)	Social welfare organisation	SW2	
23	Social welfare organisation	SW6	
24 (second interview with MN1)	Municipality district department Noord	MN1	
25	Municipality of Amsterdam	MA1	
26	Municipality of Amsterdam	MA2	November 2023
27	Municipality of Amsterdam	MA3	
28	Municipality of Amsterdam	MA4	January 2024
29	Public health NGO	NGO4	April 2024
30	Public health NGO	NGO5	

4. Results

Combined estimates from interviewees indicate that at the time of data collection (2023–2024) around 1,000 households received food assistance, around 1/16th of households in Noord (cf. Booi et al., 2023).

Interviewees pointed to different reasons underlying food insecurity, including loneliness (CFB5), family dynamics (SW3), or an inability to ask for welfare support (SW4), and gave various explanations of how food insecurity can be amplified, for instance through illiteracy (CFB5) and unhealthy food cultures (SW1). Still, most interviewees primarily attributed food insecurity to limited economic food access, and pointed to various social and material infrastructures (i.e., things and their relations; see Coutard & Florentin, 2024) specific to Noord affecting economic food access and/or leading to associated harms. The results are structured along four subsections that thematically discuss those infrastructures: food retail (4.1), urban development (4.2), welfare (4.3), and community food banks (4.4). There was generally little to no disagreement among interviewees regarding infrastructures underlying food insecurity; they rather disagreed on how to best address food insecurity. Core points are supported by significant numbers of variously affiliated interviewees. Some were able to provide more specific perspectives than others, together presenting "some kind of story" (Finlay, 2021) about food insecurity and its infrastructural causes in Noord.

4.1. Food Retail

Some social workers and community food bank volunteers mentioned that food retail in Noord is generally unhealthy. As one interviewee described:

> If I want to get some food in the neighbourhood...then I arrive at the bakery and there is...cheese sandwiches, pizza things...then at another bakery further down the road they have sandwiches with brie and meats...and in front of the supermarket there's a big stand with *kibbeling* [fried fish]. (SW1)

Supermarkets were referred to as the most important retail infrastructure in the district, and seen as dominated by processed, low-nutrition foods. One person living with food insecurity said "it is just made impossible to make a healthy choice" (CFB5). Indeed, 74.9% of Noord's food outlets are characterised as severely unhealthy or unhealthy, while their prevalence, with 3.1 outlets (supermarkets, take-away shops, restaurants, bakeries, coffeeshops, butchers, etc.) per 1,000 residents, is less than half of the city's 6.4 average (Van de Vlasakker, 2019).

Notably, over two-thirds of interviewees emphasized that price, more so than availability, excludes people from accessing healthy food, with unhealthy counterparts being more affordable. It is, for instance, "just so easy to get...a pack of noodles of 60 cents...they just don't cost you anything" (CFB5). One volunteer also explained how "it comes down to the price...to having only 10 euros a week, and then a bag of chips and 20 *frikandellen* [deep-fried minced-meat sausages] mean that my children can eat again for the next three days" (CFB2). An interviewee who had experienced food insecurity also said that "vegetables are just so expensive that if you only have 3 euros a day and you see that...green beans will cost you 1.90, then I think to myself...that is just so expensive" (CFB3). The relevance of economic access to food, let alone healthy food, increased on the back of the Covid-19 pandemic, housing crisis, energy crisis, and inflation. These drivers, according to the professionals working with community food bank volunteers (municipal employees, social workers, and NGO representatives), led to an increase food insecurity, notably "among working people" (MA1; SW4), because "after rent, healthcare, other medical bills...there is just not enough money left...to buy food, let alone healthy food" (NGO1). After Covid-19, said two NGO representatives (NGO1; NGO3), many people stayed food insecure and the "numbers did not bounce back" to pre-Covid-19 levels—and are seen as rising (SW4).

Importantly, how supermarkets nudge people towards unhealthy diets, notably through discount strategies and product placement, can especially influence people who are under financial pressure, mentioned volunteers and social workers (CBF1, 2, 5, 7; SW1, 4). Not only can a lack of spendable income itself lead to food insecurity, but also the stress associated with it can exacerbate unhealthy diets. People living in poverty are often "stuck in a cycle," explained SW4, "of thinking 'I have to survive' every day, wondering whether there will be food…which gives people so much depression, that after a while you can't think straight anymore." A community food bank volunteer (CFB5) with experience of food insecurity explained how that impacts eating behaviour: "No matter your…background…you get vulnerable and less resistant" if you are food insecure, "which costs a lot of energy and commitment which you don't have because you're feeling stressed." Such habits, explained another volunteer (CFB1), do little to alleviate stress in the long term, because "you just get more salt, more sweet, all types of E-numbers…you're forced to [eat like this] and it's easier and cheaper," and arguably addictive.

4.2. Urban Development

A municipal employee we spoke with, who used to work for a municipal planning department, recalled how his team would always call Noord "the sunny side of town" with "a lot of things happening" (MA1). Another interviewee said that planning has long been driven by "a large force of urban development power, by parties purely focused on building new [real estate] developments" (at the interviewee's request, this quote remains completely anonymous). The director of an NGO reflected similarly that "the municipality really…already for a long time…has lost their grip on the tempo…of these changes" driven by private entities (SW5). This section dives into how urban development has affected both affordable housing availability and food retail, that together not only exclude people from accessing food, but also lead to social exclusions.

Firstly, social workers and NGO representatives identified that urban development negatively impacts housing affordability, notably through gentrification. An NGO director questioned whether "existing residents really benefit from…new construction," because "there is a large amount of social housing that is all gone, that has been sold off" (NGO2). From 2012 until 2021, 3,437 social housing units were sold in Noord (Amsterdamse Federatie van Woningcorporaties, 2023)—notwithstanding newbuild social housing developments—leading to an overall decrease of Noord's social housing stock: from 68.3% in 2013 to 54.1% in 2023 (Gemeente Amsterdam, 2024a). This is partly yet significantly the result of deliberate "newbuild policies" that attract more affluent residents (Booi & Smits, 2017). Long-time residents residing in the remaining housing stock "complain that they cannot pay their rent anymore" (SW1). A social worker added that especially tenants of private sector housing are impacted by rent increases, including herself (SW3), reflecting the private sector rent increase of 16% between 2015–2021 alone (Booi et al., 2023). Linking this to food insecurity, another social worker added that rent increases especially affect "people…on welfare or a low income…because when they can't pay rent anymore [social services] get notified and a debt counsellor actually visits them," so they often rather pay rent than food (SW2). "Food is the last thing that people spend their money on" after their necessary bills, added NGO1.

Secondly, some interviewees emphasized that food retail has undergone changes due to municipality-led urban development. Two community food bank volunteers reflected how store rent increases made smaller shops and market stalls struggle. "When the rent increases, [small shops] at some point cannot pay them," said CFB2, and her colleague added: "At the market you used to have stands selling vegetables, cheese,

chickens, a bakery…now all gone because they had to increase their prices to pay for their places" (CFB1). Indeed, Noord's street market has struggled with price increases and limited market stall variety (Van der Groep, 2023). This is significant, as for many food insecure people in Noord, going to the market before closing time is an important strategy to acquire affordable or free vegetables. Simultaneously, between 2019–2024, hospitality in Noord increased by 17%, in many neighbourhoods vastly exceeding supermarkets (Sweco, 2025), following ongoing municipal policies to increase hospitality in Noord (Gemeente Amsterdam, 2022). These changes mark the demographic increase of young, highly educated, high-income earners in Noord residing in owner-occupied homes—which increased from 17% in 2005 to 31.5% in 2022 of residential dwellings—followed by municipal newbuild policies (Booi & Smits, 2017; Booi et al., 2023). Besides that, these demographic and paired commercial changes arguably affect food prices; social workers (SW1, 4–5) and a benefits councillor (MA2) observed how they these changes socially exclude lower-class, long-time residents. They "have the feeling that [they] do not have their own places anymore…there are now fewer than [before]," experienced MA2, while "hip coffee shops" emerge that serve "expats and people with children." SW5 notes that "hospitality or recreation is only for the middle class, it is not accessible, or sufficiently accessible, for socially lower classes, which is still the dominant group in Noord…leading to social exclusion…on the basis of financial situations."

4.3. Welfare

The Covid-19 pandemic and the ensuing (housing, energy, inflation) crises made people rely more on social services to receive welfare support. While Dutch welfare provision includes food aid (through the national food bank NGO *Voedselbank* with local branches), a combination of bureaucratic complexity, under-resourced social services, and institutional distrust seem to have created barriers to service provision and food assistance and can cause (additional) harm.

Social workers, volunteers, and an NGO representative (CBF1–2, 5; SW1–2, 4–6; NGO1) explained how the national benefits system, including unemployment benefits and childcare, healthcare, and rent allowances, has digital and administrative systems that are complex, especially for irregular, lower-income earners who are often least equipped to handle it. A debt counsellor, specialised in supporting people on benefits, explained: "We have a system that asks the most of those who have the least skills[,] are the most vulnerable [,and] are struggling to make ends meet….They need to be like accountants…to claim all their benefits deductions" (SW6). Another social worker added that, because of this complexity, "people are often not even aware of the…benefits they have a right to, so they remain stuck in a poverty cycle" (SW4). This mirrors how 34% of Amsterdam residents entitled to benefits do not receive them (Hoedemaker et al., 2022). Consequently, people struggle with delays, errors, or unclaimed entitlements, exacerbating their financial instability.

Crucially, local social services that can support people with applying for food or debt, income, or employment assistance are under-resourced according to social workers, municipal staff, and an NGO representative (SW1–4; MA2, 4; NGO1). As SW4 explained, "the problems are so huge, that we do what we can, but…the municipal district department just has a particular budget." Indeed, said MA4 about social services: "We cannot pay for everything." As a result, sufficient knowledge among social workers and municipal staff was said to be lacking. One social worker experienced that "social workers are not always skilled enough…to help people" (SW1). A staff member working on unemployment benefits verified that, among his colleagues, "not everyone knows which anti-poverty services the municipality offers" (MA2).

The temporality of community projects additionally harms social workers' ability to provide structural social care (SW4). While municipal budgets for employment and social services rose from 980.5 million to 1,208.8 million between 2018–2025 (Gemeente Amsterdam, 2018, 2024b), expenses stayed roughly the same when corrected for inflation (on average 3.95% in that period; cf. Centraal Bureau voor de Statistiek, 2025). Simultaneously, the *intensity* of poverty—gap between income and needs—steadily increased from 10% to 16% between 2019–2023, especially among "working poor" (from 16% to 23%; Centraal Bureau voor de Statistiek, 2024), who are often eligible for welfare support, yet are particularly difficult to reach by Amsterdam's social services (Sevil, 2024).

Additionally, the under-funding of social services, argued NGO1, makes it "very difficult to provide any sort of tailored social work." Social services necessarily uphold eligibility requirements for direct food or other forms of assistance that, reported interviewees, unnecessarily exclude people. A social worker recalled how a family was "denied food aid from *Voedselbank*…because they owned two cars [that] they first had to sell…but the husband was a taxi driver, and the mother had to drive their three autistic children to school every day, so [this] just doesn't fit in the system" (SW2). Another social worker criticized social services for similarly not providing tailored support: "Formal care services…just aim at reducing risks, so, for instance, making sure that [when someone is abused] she doesn't kill herself, but not providing any other sort of support," and "as long as people think 'How am I going to eat tonight?' " this risk-reduction approach does little (SW3).

Finally, half of our interviewees, across stakeholder groups, reported that food-insecure people can feel fear, distrust, and shame towards "public institutions," complicating their ability to seek support. As explained by a food bank volunteer, recipients often "do not want to have anything to do with public institutions" (CFB2), notably because of stories going around in Noord about social services taking children away when parents ask for food assistance (explicitly mentioned by multiple interviewees). While such stories are not always true, or are based on multi-problem situations people experienced in the past, they play into existing feelings of fear and distrust—likely arising out of oppressive historical relations between social services and residents in Noord (NGO2; SW5)—and are, in fact, crucial to understanding why people stay away from social services or *Voedselbank* (expert interview, March 2025). Additionally, people often distrust "the [national] system of benefits and allowances" because "everything needs to be proven, and if something goes wrong" people can be criminalized for "accidentally forg[etting] to provide documentation" (CFB5). Fear and distrust can be accompanied by shame: "If you are food insecure, you just notice with a lot of residents, there is a huge chunk of shame.…They don't want to air out their dirty laundry" to social services, said a community worker (SW4). Another person said: "I'm just so ashamed to go to the food bank, and my colleagues work next to the food distribution and I just try to pretend like it's normal" (SW3).

Because *Voedselbank* registrations are carried out by social workers, some food-insecure people reportedly stay away from formal food assistance. As its district director explained: "There is a really large group that we [formal food bank] were not able to reach" after Covid-19 "that consciously decided not to go to us" because *Voedselbank* is part of the social services that people distrust, fear, and feel ashamed towards (SW5). Indeed, reflected a debt counsellor, social services "require people to open up and justify…why they need" formal food aid and "people don't want anyone looking into…their financial statements…which is completely understandable…because no matter how you see it, we [social services] are part of the system…that fucked up, for too long" (SW6).

4.4. Community Food Banks

Especially since Covid-19, people experiencing food insecurity are often those who fall in between the cracks of welfare provision; they might not earn enough to eat sufficient, nutritious food, but might also not be eligible to receive benefits or allowances. The now 11 community food banks emerged as critical support infrastructures in Noord (Buurtverbinders, 2023). "Their strength," said a social worker who regularly used to work with them, "is precisely their informality, that they are not all so regulated, having limited rules, and that they just hustle" to get by, while together still supporting twice as many people as *Voedselbank* (SW6). Often successfully so, it seems: "We had some people come to us," recounted one volunteer, "that said 'Because of you I cook again, and….I eat vegetables and fruits again' " (CFB5). Furthermore, community food banks provide more than only food, also assisting food parcel recipients with wider material (SW4; CFB1) and emotional (fieldnotes; SW3) needs, and creating reciprocal relations (CFB5; CFB7; MN1; MA2). Their approach to social care differs from the often distrusted national and local welfare infrastructures, making residents trust them more (SW4; SW5; SW6).

Yet, community food banks struggle to remain afloat. Firstly, they are dependent on volunteers who themselves often live in precarious health and/or financial situations. With all of them "something is wrong" (CFB1): "They need a significant amount of support and, as a figure of speech, also themselves go to food banks" (SW6). Secondly, they are often dependent on temporary locations and funding. They do receive support from social workers in managing these insecurities, but in the end, administrative burdens lie with volunteers themselves. Illustratively, the recent cut of municipal funding for one of the community food banks burdened volunteers to find additional funding (Soudagar, 2024). Thirdly, food supplies have been dwindling since the end of the pandemic with supermarkets increasing their efficiency to reduce waste: "Shop owners and suppliers are all run a bit tighter nowadays, everyone is trying to make sure they are not left with as much [food]" (FFB1).

Additionally, while community food banks attempt to stay independent, they also (in)voluntarily align with and adopt practices akin to those of welfare infrastructures (Section 4.3). An NGO representative working closely with community food banks (NGO2) explicitly criticised their "paternalistic" style of food provision, "putting everything in a bag and then saying 'Take it' [to recipients]…not organising it differently so that people are allowed to choose" (NGO2). While community food bank volunteers themselves emphasized their difference from social services (CFB1–4) and others did so emphasizing their *informality* (SW2, 4–6; MA1–2), their styles of operation can simultaneously lead to feelings of shame among recipients similar to those perpetuated by social services. One volunteer said: "My son…would never stand in line here [because] imagine his friends would see [him], he would find that horrible, the shame alone" (CFB2). Furthermore, community food banks variably started to do intake conversations, involving bank statement screenings and eligibility assessments, akin to those done by social services and *Voedselbank*. From 2024 onwards, the two largest "informal food initiatives [were] required to do intakes" by funders (SW2), while others already "used their own eligibility requirements and wanted to check people's bank statements" (SW6) to deal with food scarcity issues.

5. Discussion and Conclusion

This article studied food insecurity in Amsterdam Noord, a city district undergoing significant changes in recent years. We used community geography to explore stakeholder experiences of food insecurity and its underlying

causes in Noord, conceptualizing infrastructures as embodiments and reinforcements of structural violence (Rodgers & O'Neill, 2012). We found that the urban food environment of Noord stages an interplay of material and social infrastructures that (re)produce food insecurity and create other, associated harms. Notably, welfare infrastructures that ideally alleviate food insecurity can, in fact, not only exacerbate it but also cause additional harm. Below, we verify our findings and trace how the identified infrastructures are instrumental mediums of violent structures.

5.1. From Food Retail and Urban Development Infrastructures to Corporate and Neoliberal Structures

While food insecurity is multidimensional, unaffordability is a key driver in Noord (see also Frongillo et al., 2017; Loopstra, 2018; Ruel et al., 2010; M. D. Smith et al., 2017). Food retail infrastructures were reported as crucial to this, with healthier foods being more expensive and unhealthy options overwhelmingly available—indeed the case in Noord (Helbich et al., 2017; Van de Vlasakker, 2019). Supermarkets were seen as the most important retail infrastructure. 96% of Dutch residents—especially lower-income ones—use supermarkets as their main food source (Hoenink et al., 2023). This reflects a widespread corporatization of food systems, where "supermarkets...determin[e] what is produced, where, to what standards and price, and the outlets from which food is to be sold" (Burch et al., 2013, p. 216), consistent with the development of Dutch supermarkets (Grin, 2012), which prioritise profitability over healthy food affordability and accessibility (Middel et al., 2024). Supermarkets in Noord can thus be seen as local material channels of wider "supermarket structures" in the Netherlands and beyond. As 79% of supermarket offerings are unhealthy and marketed "overwhelmingly" and "irresistibly" (Raad voor Volksgezondheid & Samenleving, 2024), interviewees described food-insecure people struggling to make healthy choices on the back of poverty-related stress. Unhealthy food can become a coping mechanism for financial stress (see also Santiago et al., 2011), reinforcing cycles of food insecurity and poor health (Nagpaul et al., 2022).

Furthermore, interviewees reported that food retail changes (Sweco, 2025) tied to municipality-led gentrification (verified by Van Gent et al., 2019) have both made it harder for food-insecure people to access affordable, healthy food, and led to feelings of social displacement among lower-income residents (see also Anguelovski, 2015). In Deener's (2017, p. 1303) terms, this signals a "political economy of uneven territorial development" locally channelled through "infrastructural exclusions" (re)producing food insecurity. Following Hochstenbach and Ronald (2020), we argue these commercial changes reflect the national marketization of urban development: since the 1990s, national policies have promoted owner-occupied and unregulated private rentals, transformed social housing corporations into for-profit entities, and led to the sale of social housing stock—all followed through in Amsterdam (Amsterdamse Federatie van Woningcorporaties, 2023). These policies have disproportionately benefitted middle- and high-income residents, who have moved to Noord in large numbers (Booi et al., 2023). Besides retail shifts, this nationally-stimulated, municipality-led urban development was seen to impact spendable income, especially as real incomes stagnate and rent costs rise (cf. Frijters, 2024). As interviewees noted, lower-income residents often prioritise housing costs over healthy food (see also Dominick et al., 2018; Fafard St-Germain & Tarasuk, 2018).

5.2. From Welfare and Community Food Bank Infrastructures to Structural Drivers of Decentralization and Austerity

Core findings are those related to the harms—feelings of distrust, shame, fear, administrative burdens—associated with place-based welfare and community food bank infrastructures ideally set up to alleviate food insecurity. First, interviewees referred to the complexity and strict requirements of national welfare provision, which, following Simonse et al. (2023, pp. 265–266), "see[m] to increase rather than decrease financial insecurity for financially vulnerable households." While Noord-based social services can support people with administrative burdens, among others, social workers can struggle to provide tailored support, rather upholding standardized eligibility requirements that exclude people from service access—also the case for *Voedselbank*, of which the food aid registrations are carried out by social workers. This, we argue, reflects the structural decentralization of Dutch social work in 2015 and paired budget cuts that made service provision increasingly complex for social workers (Dibbets et al., 2021; Jansen et al., 2021). This risks playing into existing feelings of distrust among long-time, lower income residents in Noord towards social services, compounding oppressive historical relations (Gemeente Amsterdam, 2021b; Kremer, 2024), leading residents to stay away from food or other forms of assistance, and causing or exacerbating feelings of stigma.

In response, community food banks emerged, providing food and additional support, especially to people ineligible to receive welfare assistance. While they are generally trusted by residents (see also Luger & Kotsila, 2025), they face ongoing struggles due to what Mitchell et al. (2025) call "infrastructural platforms." In Noord, these include insecure funding, locations, volunteer capacity, and food supply. Community food banks thus take up the burden of welfare failures, while limited or reduced government support simultaneously hollows them out. This mirrors the effects of Dutch austerity politics of the last decades: "Cutbacks on healthcare expenditure and social welfare benefits...in the wake of the Eurozone public debt crisis" resulted in "informal caregivers, long-term care organisations and municipalities...experienc[ing] substantial difficulties to cope with the reforms" (Janssen et al., 2016, pp. 101–102). When, in response, community food banks tightened income requirements, as we found, they risked replicating and reinforcing the same stigmatization that welfare structures already impose on food-insecure people (May et al., 2019; Meyer et al., 2018). Taken together, the "chaotic welfare provisions" of place-based welfare and, to a lesser degree, community food bank infrastructures, we find, "signal...subordination and exclusion" and so, we argue with Hodgetts et al. (2014, p. 2050), infrastructurally embody the "structural violence [of] the brute nature of neoliberalism and institutional responses to it."

5.3. Urban Food Environments, Food Insecurity, Infrastructural Violence, and Community Geography: Reflections and Implications

Our results point to the complex nature of the experiences and causes of, and attempts to remedy, food insecurity in Noord's food environment. Importantly, despite attributing this infrastructural violence partially yet significantly to municipal policies in Amsterdam, these findings are likely not unique. They can be characteristic of similar urban areas with, at face value, a lot of available (albeit unhealthy) food, gentrification, and problematic social service delivery—for instance, gentrifying neighbourhoods in Portland, Oregon, where healthy food is plentiful for "gentrifyers" as opposed to working-class people and people of colour (Breyer & Voss-Andreae, 2013; Sullivan, 2014).

We contribute to adjacent literature in two ways. First, urban food environment research has long been critiqued for focusing more "on creating environments that promote healthy choices than on the political and economic decisions which shaped these environments to begin with" (Shannon, 2014, p. 256). While studies on *food deserts* (low food availability), *food swamps* (low healthy food availability), and *food mirages* (low healthy food affordability) have expanded the field (Yang et al., 2020), such perspectives still tend to overlook how, according to Page-Reeves et al. (2017, pp. 5–6), "the food environment is a socially constructed reality" produced by, notably, housing developments, local welfare systems, and food charity—all infrastructures that this article explored—which "further influence the food environment and the food security status of households in a neighbourhood."

Second, while food insecurity research has well established its global drivers, it generally lacks insight into place-based causes underpinning food insecurity (Odoms-Young et al., 2024; D. Smith & Thompson, 2022; cf. Vonthron et al., 2020). This article thus foregrounds place-based infrastructures underpinning food insecurity as embodiments *and* reinforcement of wider social arrangements, pointing to the responsibility of both "place-based actors" and society at large to change urban infrastructures for more just (food) futures (Rodgers & O'Neill, 2012). Infrastructural violence conceptually threads the line between localizing or individualizing causes of food insecurity (e.g., it being the result of particular residents failing to get a job) and anonymizing them (e.g., it is the result of inequitable social arrangements). Such insights are much needed to understand why and how urban food policymaking continuously fails to take into account food insecurity, and how to address this (cf. Moragues-Faus & Battersby, 2021).

Finally, a core finding infrastructural violence helped bring out is how local welfare and community food bank infrastructures contribute to food insecurity and associated harms by both embodying and reinforcing changes in wider welfare structures following decentralization and austerity. This brings out complexities much needed to achieve any sort of "infrastructural justice" in Noord, or what Williams (2022) calls *care-full food justice*: the ways in which care infrastructures (like welfare services and food banks) might alleviate rather than produce or exacerbate food and wider social injustices.

A number of criticisms can be raised. First, our interpretivist approach inevitably paints a partial picture. Infrastructures less prominent or not mentioned by interviewees that can affect food insecurity are, for instance, local food production (e.g., community gardens) and alternative forms of food retail (Marsden et al., 2018). Second, future studies could benefit from concretizing infrastructures methodologically, with methods like "go-alongs" (e.g., Santo-Tomás Muro et al., 2020) or "walkshops" (e.g., Rondel & Henneke, 2025), and including longitudinal and quantitative data (D. Smith & Thompson, 2022). This could improve understanding how "bodies, social and physical infrastructures and policies" interact in Noord, needed to "develop effective food policies" and wider food governance structures (Moragues-Faus & Carroll, 2018, p. 1349). Third, infrastructural violence downplays people's agency; stand-alone, it has little emancipatory potential, similar to structural violence (Jackson & Sadler, 2022). Much research has, for instance, already uncovered the care and justice contributions of community food banks across geographic settings (e.g., Cloke et al., 2016), or the "powerful" role of food policy actors (e.g., Mattioni et al., 2022). Over-focusing on (infra)structural violence, like this article does, risks obscuring the everyday forms of resistance through which residents, volunteers, and professionals navigate and challenge food insecurity—the first author of this article explores this in another manuscript on the same case study (Luger & Kotsila, 2025).

5.4. Concluding Recommendations

The urban food environment of Amsterdam Noord stages various infrastructures that actively produce food insecurity and associated harms, including food retail, municipal planning, social services, community food banks, voluntary networks, funding schemes, bureaucracies, and trust. In our discussion, we argued how these infrastructures variably embody and, at times, reinforce violent structures: housing marketization, supermarket corporatization, historical relations between residents and the state, welfare bureaucratisation, social service decentralization, and austerity politics. Key findings are that urban development, in various ways, impacts experiences of food insecurity, and that welfare and community food bank infrastructures can, in fact, exclude people from accessing healthy and affordable food and/or contribute to significant administrative burdens and feelings of fear and shame. Taken together, this article points to the complex, layered, and active production of food insecurity in an urban food environment.

Our infrastructural violence lens, supplementing structural violence, illuminates that the ability to address the various harms associated with food insecurity lies, at least partially, locally, with volunteers, social workers, and municipal staff, because they are both shaped by but also shape "their" respective community food bank, social welfare, and municipality infrastructures. Practically, we recommend that policymakers acknowledge food insecurity as actively (re)produced both globally and locally, and as often intersecting with additional forms of harm; they should make efforts to uncover how exactly in their own contexts. Additionally, we call on them to scrutinise local welfare and food charity organisations, as our findings point out they can—often unintentionally, yet disproportionally—harm those already living with food insecurity.

Academically, future studies should, firstly, explore how community food banks can contribute to turning their infrastructural violence into care-full food justice (Williams, 2022) by collaborating with state institutions (Power et al., 2022). Secondly, studies should focus on municipal staff who are increasingly responsible for projects on "just urban food systems" (cf. Sonnino, 2023), as is the case in the FoodCLIC project, and who are thus relatively powerful state actors in the production of ideally healthier and more accessible urban food environments (Luger et al., 2025). Thirdly, despite decades of research, urban food insecurity is not improving, even in food policy-pioneering cities (Moragues-Faus & Battersby, 2021). An ongoing engagement is thus needed with the knowledge production that informs urban food governance. This is both a question of critically investigating "who funds and benefits from urban food governance processes" (Moragues-Faus & Battersby, 2021, p. 5) and choosing more radical research approaches (e.g., community geography, transdisciplinary research, radical reflexivity; T. S. Jones & Loeber, 2024; O'Neill & Luger, 2024).

Conflict of Interests

The authors declare no conflict of interests.

Data Availability

The data supporting the findings of this study cannot be made publicly available to ensure participant anonymity.

LLMs Disclosure

Not applicable.

Supplementary Material

Supplementary material for this article is available online in the format provided by the authors (unedited).

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