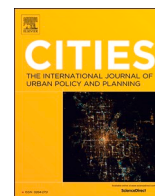


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Merle Müller-Hansen

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Slow violence in digital food environments: App-food-body assemblages in urban India

Merle Müller-Hansen

University of Augsburg, Center for Climate Resilience, Geography Department, Universitätsstraße 12, D-86156, Germany

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ABSTRACT

This article explores how food-related apps shape consumption practices, corporeal experiences, and intersectional power relations in urban India. Drawing on data from Hyderabad, Chandigarh, and New Delhi, these interactions are addressed as *app-food-body assemblages*. Such assemblages give rise to *slow violence* - harm that is gradual, dispersed, and normalised, often even by those affected. The analysis identifies three interrelated dimensions where slow violence is (re)produced: (1) how app-mediated food choices reinforce normatively aestheticised body ideals, contributing to disordered eating; (2) how digital food practices entangle with affective food labor and intersectional inequalities in navigating urban food platform environments, contributing to obscured hierarchisations; and (3) how algorithmic infrastructures co-produce the aspirational eating and toxic embodiment of platformed ultra-processed foods. By grounding these dynamics in debates on mundane violence and digital urban food environments, this shows how uneven geographies of digital affect and exclusion emerge as everyday sites of slow violence in contemporary Indian cities, calling for urban and regionally adapted efforts that complement national and international regulation to effectively counteract these harmful dynamics.

1. Introduction

Digital food platforms are quietly reshaping the relationship between foods and bodies—how we eat and how we make our bodies matter in the everyday is increasingly mediated by digital food environments (Granheim et al., 2022). Particularly in urban India, popular food apps such as Zomato (which acquired Uber Eats' India operations in 2020), Swiggy, and Rebel Foods' platform EatSure (formerly FAASOS) are reshaping consumption practices (Expert Market Research, 2025; John, 2023). Such platforms deliver more than convenience: they curate desirable bodies, track consumption, and reshape the practices, emotional labor, and possibilities of feeding oneself and others in a city. In that sense, digital tools do not merely reflect food-body relations—they extend and shape them within algorithmic and socio-cultural structures.

While digital inclusion is often framed as a form of empowerment (Singh et al., 2025), digital food environments also (re)produce gendered inequalities in very subtle, embodied ways. Public health discourses, for instance, rely on reductive medical and cultural proxies for wellness (Guthman, 2011), while apps aestheticise consumption and reinforce narrow, gendered body ideals—drawing, quite literally, a thin line around who and what is considered healthy or desirable.

These dynamics constitute forms of *slow violence*—harm that is dispersed and incremental, yet frequently goes unrecognised in everyday life as part of mundane violence embedded in both online and offline spaces (Bork-Hüffer et al., 2023). For food apps, this violence unfolds across three interrelated domains of everyday digital life in urban India: through embodied norms of aestheticised health and beauty (Brydolf-Horwitz, 2022), through hierarchical affective urban practices (Warde, 2016; Welch et al., 2020; Puig de la Bellacasa, 2017; Mol, 2021), and through digitally amplified aspirational eating of harmful ultra-processed foods as lifestyle marker (Nixon, 2011).

The central question guiding this analysis is: How do app-mediated food environments in urban India (re)produce slow violence across bodily norms and practices, affective relations, and digital infrastructures—and how do individuals navigate these power dynamics in their everyday lives?

To explore these dynamics, the concept of the *app-food-body assemblage* posits a heuristic for tracing how digital interfaces, food practices, and embodied experience become entangled across aesthetic, affective, and infrastructural domains. This conceptualisation extends Deborah Lupton's (2018) notion of human-app assemblage, which captures the co-constitution of apps and embodied practices. While Lupton has since mapped the food-app landscape (2021) and theorised digital food

E-mail address: merle.mueller-hansen@uni-a.de.

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cultures more broadly (2020), this particular assemblage foregrounds food itself as a constitutive element. In the context of digital food environments in urban India, it highlights how platformised infrastructures—encompassing popular food delivery and tracking apps as well as food- and body-focussed social media platforms like Instagram—entwine with materialities and experiences of eating, corporeal wellbeing, and socio-affective aspiration.

The analysis is based on mixed-methods research conducted between 2022 and 2025. The study set out to combine a nationwide science-based nutrition app and digital survey intervention with site-specific fieldwork in the three regional capitals Hyderabad (Telangana), Chandigarh (Punjab and Haryana), and New Delhi (National Capital Territory). Finally, the Chandigarh-based co-created prototype app (www.nutriaide.org) was not actively used by a group of 240 pretesting participants in Hyderabad, rendering a nation-wide intervention ethically inapt. Rather than launching a nation-wide intervention, site-specific research was aimed at understanding everyday digital food practices as they are embedded across specific urban Indian contexts. This research was informed by feminist ethnographic methods in both physical urban (Buch & Staller, 2011) and digital spaces (Kaur-Gill & Dutta, 2017), carried out during four research stays in the three cities. This included individual interviews, focus group interviews with follow-up WhatsApp group chats, as well as written field notes and digital observations saved to folders in Instagram. Quantitative data was collected through a survey with 720 participants in Hyderabad, along with two rounds of in-depth interviews ($n = 23$ and $n = 18$). Further insights were drawn from longitudinal ethnography of apps and continuous review of academic literature on urban cultures, internet research, and food consumption.

Within urban-digital food interactions, affective ecologies capture the relational entanglements with our environments shaped by feelings, attachments, and care (Puig de la Bellacasa, 2017). This notion pinpoints that the urban infrastructures of the three Indian regional capitals stratify platform-mediated food environments not only materially but also along socio-affective lines. For example, while the expanding digital food environment offers some women in middle- and upper-class and majoritarian cultural contexts a broader affective ecology and sense of spatial autonomy through delivery or dining out, this flexibility is contingent and obscures the lived realities of the lower classes and casts. Algorithmic and infrastructural conditions privilege majoritarian users and cuisines while marginalising others. In this way, the app-food-human assemblage reinforces gendered, classed, and caste-based exclusions, shaping who can access, prepare, and enjoy meals.

By attending to the material, affective, and infrastructural layers of embodied food app use, this article contributes to debates on digital urbanism and mundane violence. At this intersection, slow violence unfolds as everyday digital harm within urban Indian app-food-body assemblages.

2. Theory: mundane violence in food environments

This article builds on the conceptual backdrop of *digital food environments* (Granheim et al., 2022), which encompass both the material infrastructures and symbolic conditions that influence dietary choices. Following the High-Level Panel of Experts (HLPE, 2017), here, different digital food environments are the interfaces between individual agency and broader systemic forces—social, cultural, economic, and physical—both on- and offline.

Yet food environments are not just functional systems. Drawing on Puig de la Bellacasa's (2017) notion of *affective ecologies*, I conceptualise them as relational and emotionally charged interfaces, where food acts as a medium of care, aspiration, shame, inclusion, and exclusion. In their original sense, Puig de la Bellacasa's (2017) "affective ecologies" refer to what distinguishes care from mere concern: a mode of doing and being relationally entangled in "webs of life" with more-than-human worlds, including the matters we deem edible. In digital contexts, these

ecologies are reshaped by algorithmic infrastructures, platform logics, and socio-technical inequalities. Digital food environments thus determine not only what comestibles are accessible and visible, but also how they are framed within regional context: what bodies are rendered desirable, what practices count as healthy or aspirational, and who is excluded from normative culinary experiences.

Against this auxiliary conceptual backdrop that helps understand affective pathways of harm in different regional nutrition contexts, the analysis develops a framework that traces forms of *mundane violence* (Bork-Hüffer et al., 2023) embedded in digital food environments. Three interlinked theoretical notions of *slow violence in app-food-body assemblages* structure the analysis of these harms.

2.1. App-food-body assemblages

To grasp how bodies, technologies, and food practices are mutually constituted, this article proposes the specific *app-food-body assemblage*. This formulation extends Lupton's (2018) concept of *human-app assemblages* while building on her analysis of digital food cultures (2020) and nutrition app ecologies (2021). Together, these works show how apps mediate culinary practices through convenience, visibility, and aspiration. The topic-specific naming of the assemblage contributes to the field by drawing these insights together with Lupton's call for a more-than-human perspective on digital health (2019a,b), situating food as an explicit node that binds bodily practices, technological infrastructures, and affective attachments—actively configuring which comestibles, bodies, and affects are recognised, circulated, or excluded. By foregrounding this assemblage as a specific unit of analysis, the article's framework highlights how everyday digital food practices both reproduce and normalise slow violence across embodied, social, and infrastructural levels. The *app-food-body assemblage* thus illuminates how digital platforms both materialise and stratify embodied culinary relations.

2.2. Mundane digital violence in three modes of slow embodied violence

Framed through the lens of *digital geographies of mundane violence*, the harms embedded in urban food environments foreground what Tabea Bork-Hüffer and colleagues (2023: 170) describe as "critical and reflective engagement with the spatialities, dynamic and non-linear temporalities of mediated violence unfolding in entangled online and offline spaces." This allows us to examine the often-overlooked forms of harm that unfold quietly and persistently through ordinary digital practices and infrastructures.

Within this broader conceptualisation, *slow violence* is a specific form of mundane violence—one that is temporally incremental, dispersed, and difficult to perceive, yet with deeply cumulative effects on bodies, communities, and ecologies. While its founding thinker, Robert Nixon (2011), originally theorised slow violence mainly in socio-environmental terms, it has since been adapted to explore the affective and embodied harms embedded in digital everyday practices (Brydolf-Horwitz, 2022).

In urban India, slow violence operates across three interrelated individual, social, and structural modalities of app-food-body assemblages. The first is digitally disciplining food embodiment (slow violence of digital aestheticisation), aspirational food consumption practices (slow violence of urban platform hierarchies), and ultra-processed food exposure (slow violence of platformed toxic harms).

2.2.1. Slow violence of digital aestheticisation

Drawing on Brydolf-Horwitz study of cyberbullying (2022), app-food-body assemblages produce, reproduce, and normalise narrowly curated ideals of beauty, health, and desirability—what she identifies as digitally mediated, aestheticised slow violence. Algorithmic infrastructures and curated visual cultures subtly yet persistently enforce these ideals, disciplining users through embodied social comparison,

aesthetic judgment, and cumulative micro-aggressions. In urban Indian contexts, such dynamics intersect with the persistent categories of caste, class, and gender, amplifying stratified experiences of digital exclusion and bodily regulation (Datta, 2020).

2.2.2. *Slow violence of urban platform hierarchies*

The second mode of slow violence emerges through app-food-body mediated affect. While Alan Warde (2016) highlights how food consumption practices are deeply stratified along lines of class, Daniel Welch (2017; Welch et al., 2020) introduces a useful concept that ties socially stratified practices to affect: *teleoaffective formations* are structures of practices and emotions that align food consumption ideals with imaginaries of social mobility. In India, consumption ideals of middle- and upper classes are reinforced by media influencer content and app-based food lifestyle curation (Banerjee et al., 2020; Baviskar, 2018). This reifies classed and gendered responsibilities of alimentary care (Mol, 2021; Puig de la Bellacasa, 2017), while limiting alternative foodways and modes of nourishment in hierarchised urban spaces.

2.2.3. *Slow violence of platformed toxic harms*

The third form of slow violence operates at the intersection of app-food-body assemblages and toxic exposure. Following Nixon (2011), harmful substances—such as additives, preservatives, and chemical residues—accumulate unequally in bodies, often along lines of socioeconomic marginalisation. In the Indian context, weak regulatory regimes, fragmented accountability, and short media memory (Deb, 2023; DeLoughrey et al., 2015) mean that the dangers of ultra-processed foods often remain invisible or discredited, despite reported adverse health effects of long-term exposure (Lane et al., 2024). These harms are exacerbated by digital availability and digital marketing (see Ghosh-Jerath et al., 2024), normalising such products as modern, convenient, and aspirational lifestyle markers at an affordable price—without accounting for the long-term effects of processed food consumption.

3. **Methods: situating food practices in the digital everyday**

This study draws on multi-sited mixed-methods research conducted as part of the NutriAIDE project (www.nutriaide.org) between 2022 and 2025 in India, focusing on urban middle-class food practices in Hyderabad, New Delhi, and Chandigarh (see Fig. 1). Hyderabad, the capital of Telangana, exemplifies Telugu-speaking and South Indian traditions

within a rapidly expanding tech-driven megacity; Chandigarh, the shared capital of Punjab and Haryana, represents North Indian cuisine alongside a strong regional middle class; and New Delhi, the cosmopolitan national capital, embodies Hindi-dominant cultures shaped by migration and policy influence.

The methodological approach combines feminist ethnography with digital methods to examine how gendered, classed, and caste-differentiated subjectivities are shaped and negotiated within these regionally specific digital food environments. In Hyderabad, a survey ($n = 720$), qualitative interviews ($n = 41$), and both in-situ and online ethnography provided insights. In Chandigarh, the same ethnographic methods were supplemented with group interviews ($n = 14$) and long-term digital data collection via mobile messaging, allowing for comparison across Indian North–South contexts and the study of group dynamics among middle-class participants. In New Delhi, one of the largest cities in the world, data collection centred on contrasting publicly presented food practices in diverse middle-class locations, connecting physical and digital space through in-situ and online ethnography.

This mixed-methods design was tailored to the particularities of each city: while survey and interview data in Hyderabad generated depth and breadth for analysing digital food practices in a rapidly transforming tech hub, Chandigarh required methods that could capture collective negotiation of regional culinary identities, and New Delhi demanded attention to the visibility of food practices in cosmopolitan, heterogeneous spaces. Most data was collected in English, with sporadic Telugu and Hindi interpretations—resulting mostly redundant among the urban middle-class participants. The resulting analysis is therefore comparative rather than uniform, attending to how app-food-body assemblages materialise differently across varied regional contexts.

3.1. *Feminist ethnographic fieldwork*

I conducted in-person and digital ethnographic research, drawing on feminist methodologies that foreground relationality, situated knowledges, and embodied expertise (Buch & Staller, 2011). Fieldwork attended to domestic food practices, daily routines, and online consumption, paying close attention to how these were mediated by platform infrastructures, socio-cultural norms, and urban environments.

In India, food and care arrangements are deeply gendered, with women—particularly young women—expected to shoulder the majority of domestic labor (Nagar & Virk, 2017). At the same time, they are called

FEMINIST FRAMEWORK

Relationality | Situated Knowledges | Periscoping | Genderscapes

DIGITAL PLATFORM ETHNOGRAPHY (Longitudinal Internet Research, 3.5 Years)

Platforms → Zomato | Swiggy | HealthifyMe | Instagram
 Methods → Interface Analysis | Influencer Tracking | Algorithmic Observation
 Focus → Normative Body Logics | Aspirational Consumption | Classed/Casted Mediation

COMPARATIVE URBANISM

HYDERABAD / TELANGANA

Survey (n=720)
 Semi-Structured Interviews (n=41)
 Participatory Mapping
 In-Situ + Online Ethnography

→ Rapid Tech-Urban Transformation;
 Expansion of Middle-Class Platform Use

CHANDIGARH / PUNJAB & HARYANA

Interviews (n=14)
 Generational Focus Groups
 Mobile Messenger Dossiers (WhatsApp)
 In-Situ + Online Ethnography

→ Collective Negotiation of Regional
 Culinary Identity Across Generations

DELHI / NATIONAL CAPITAL TERRITORY

In-Situ Ethnography
 Online Ethnography
 Field Notes
 Observation of On/Offline Food Convergence

→ Visibility and Performance in Highly
 Heterogeneous, Rapid-Paced Urban Space

COMPARATIVE FEMINIST ANALYSIS

Methodologically Situated Urban-Digital Food Environments Revealing Regionally Differentiated App-Food-Body Assemblages
 Gendered | Classed | Casted Subjectivities within Platformised Urban Life

Longitudinal Research

City Case Studies

Fig. 1. Mixed-methods design.

upon to embody digitally amplified normative ideals of health and respectability (Sinha et al., 2024). Informed by Datta's (2020, 2021) concept of *periscoping*—a methodological and analytical move that shifts perspective to capture subtle, often hidden practices and violences that mainstream frameworks overlook—I attuned to quiet, everyday forms of social-technological interaction, tension, and resistance in these arrangements. Periscoping foregrounds local vantage points rather than universalised, “international” standards, making it possible to critically analyse slow violence as it materialises through regionally specific norms and expectations. This orientation enabled me to notice how young women subtly subverted expectations through embodied micro-acts (e.g., slurring their feet during chores, modifying recipes they were supposed to prepare to assert agency). These insights shaped both my ethnographic sensibility and interpretative lens across regionally distinct *genderscapes*—that is, spatially and culturally specific configurations of gendered relations and expectations (Datta, 2021)—in the three cities.

Data was collected through semi-structured interviews with self-identified middle-class participants in Hyderabad ($n = 23$ in 2022; $n = 18$ in 2024) and Chandigarh ($n = 14$). Interviews were conducted in reciprocal settings consistent with feminist interviewing practices (Hesse-Biber, 2011), pseudonymized and coded both in- and deductively using MAXQDA (Mayring, 2000). In Hyderabad, I complemented interviews with participatory mapping exercises ($n = 23$, 2022) that invited participants to visually and narratively represent their food environments, drawing on embodied and mental mapping techniques (Schurr et al., 2023; Valentine, 1999).

In Chandigarh, I introduced a mixed-method approach combining in-situ and online ethnography (Buch & Staller, 2011; Kaur-Gill & Dutta, 2017), structured around focus groups. Participants ($n = 14$) were divided into three groups according to their generational familiarity with digital media. The first group (ages 18–33, $n = 5$) grew up with social and mobile media; the second (ages 34–49, $n = 4$) became familiar with internet-enabled computers early on in life but adopted newer digital platforms later; and the third (ages 50 and above, $n = 5$) encountered digital media later in life. Each group was invited to engage in a collaborative decision-making task via WhatsApp group chats. First, they collectively decided whether to dine out, order food online, or cook together. They then negotiated where to meet and which items to prepare or consume during an in-person focus group interview. As a follow-up, participants responded to prompts about their food-related app usage and digital culinary practices via the same WhatsApp threads. These ongoing exchanges were collected as mobile messenger dossiers (Bork-Hüffer et al., 2023), extending the fieldwork beyond the in-person meeting into the digitally mediated temporal and spatial rhythms of everyday life.

3.2. Platform-based digital ethnography

I also conducted digital ethnography (Kaur-Gill & Dutta, 2017) across key platforms shaping urban Indian food environments, including Zomato and Swiggy (food delivery), HealthifyMe (nutrition and fitness tracking), and Instagram (social media). These platforms were approached as spaces where aspirational consumption, health norms, and classed/casted imaginaries are algorithmically curated and affectively circulated (cf. Light et al., 2018). For three and a half years, between April 2023 and September 2025, I regularly engaged in the platform content, user interfaces, influencer narratives, and user interactions, creating notes, screenshots, and—for Instagram—specific in-app content folders for each of the three cities, in order to capture how normative body shapes, care practices, and culinary aspirations are shaped and reproduced.

3.3. Survey data

To complement the qualitative work, the analyses draws on selected

survey data gathered from 720 middle-class participants in Hyderabad between July 2023 and January 2024. Data collection followed an interdisciplinary standard operating procedure (SOP) and was implemented in participants' homes by trained researchers from ICMR-National Institute of Nutrition, with a background in nutrition and its education and communication.

Sampling employed a snowballing strategy, with inclusion criteria designed to control for middle-class background: participants had to live in ≥ 2 BHK (two-bedroom, hall, kitchen—a common marker of middle-class housing in India) or above, own a smartphone with internet access, and not work in professional nutrition. Participants also had to be adults and were selected to ensure diversity across places of residence, age, gender, occupation, and religion. Anthropometric measurements were conducted on-site with calibrated tools, and responses were collected through tablets with the digital Lime Survey tool including geographical, psychological, and dietary questions. This article focuses on survey items related to disordered eating, digital consumption practices, body image, motivations for food-related app use, and impacts of such platforms.

The final sample consisted of 59% women and 41% men, with participants ranging from 18 to 81 years of age. Reflecting their middle-class status, 84% held university degrees. A majority were either single (44%) or married (53%), with 31% currently in education (60% women, 40% men) and 47% employed full-time (52% women, 48% men). Reflecting Indian social standards, most lived with family—either nuclear or extended (79%)—while only 14% lived alone or with a partner. Religious affiliation approximated national demographics: Hinduism (79%), Islam (16%), and Christianity (4%). Dietary patterns were diverse, with 3.3% identifying as vegan, 19.7% as lacto-vegetarian, 13.2% as ovo-lacto-vegetarian, and 63.8% as meat-eaters—predominantly consuming chicken and mutton, foods generally accepted across religious lines.

4. Slow violence in bodily experiences and norms of internet mediated eating

Participants across study sites, research methodologies, and genders reported largely negative mental and physical effects from nutrition-related app use. To explore broader social influences on this observation, 720 survey participants in Hyderabad responded whether healthy or sustainable nutrition were accepted within their social circles. A clear majority—90% for healthy eating and 81% for sustainable eating—confirmed social acceptability, ruling this out as the main cause of dissatisfaction. Instead, the fact that nearly half of the participants continued regular engagement with food platforms, despite adverse experiences, suggests a cognitive-emotional dissonance between aspirational goals, platform offerings, and lived realities. The following three sub-sections unpack such dynamics through the analytic lens of slow violence.

4.1. Disciplining bodies through selective digital aesthetics

This section examines how the app-food-body assemblage exerts slow violence through the gendered aesthetic disciplining of nutrition-related embodiment. Here, digital infrastructures, food platforms, and bodily practices intersect to normalise narrow ideals of health and beauty. Drawing on Brydolf-Horwitz's (2022) notion of aestheticised slow violence, curated images, algorithmic filtering, and platform logics quietly yet persistently shape how bodies are judged and lived, including how gender is experienced and performed as an embodied identity.

The Hyderabad survey data highlight embodied distress among the sampled middle class participants. Younger, digitally native respondents of all genders under the age of 30 appeared particularly affected: 82% reported dissatisfaction with their body shape, echoing Lavis's (2015) observation of disproportionate body distress in this demographic across global contexts. At the same time—above the international average, but

consistent with the negative nutrition psychological health trends documented in low- and middle income countries (Mudunna et al., 2025)—distress was not limited to youth. Two-thirds of all respondents indicated to be dissatisfied with their appearance, and 34% had received negative comments about their body shape. Notably, while 64% wanted to change their body, 36% simultaneously felt unable to do so. This discrepancy points to a deep internalisation of narrow body ideals alongside barriers to achieving them. Contrary to expectations shaped by India's enduring structures of classic patriarchy (Datta, 2021), these patterns showed little gender difference, both in embodied distress and in motivations for nutrition-related app use. Reported motivations included enhancing nutritional awareness, discovering recipes, and health and fitness tracking, most often through YouTube, Instagram, Swiggy, and Zomato (in that order of reported relevance). The contrast between these stated motivations and the high prevalence of body dissatisfaction—particularly among younger, digitally native users—suggests how aestheticising app-food-body assemblages enact slow, cumulative forms of violence on embodied self-perception, even as people continue to use food apps as part of their everyday lives.

Patterns of this slow violence were particularly evident in the Hyderabad survey data related to disordered eating. Although a clinically validated psychological screening is still pending, preliminary assessments—based on survey filter questions alongside Body Mass Index (BMI) and Waist-to-Hip Ratio (WHR) measurements—suggest that 29% of participants may be exhibiting patterns consistent with disordered eating at the time of assessment. Using BMI and WHR thresholds specific to the Indian population (Sruthi et al., 2023), 30% of the sampled individuals fell within the normal weight range, 20% were classified as underweight, and 50% were categorised as overweight, including 15% in the adipogenic overweight subgroup. Notably, the majority (55%) of those flagged by the preliminary disordered eating screeners were under the age of 30. More specifically, among the 18 to 25 year-olds, 48% were flagged by the restrictive eating disorder filter question. This proportion is both alarmingly high and broadly consistent with existing research on eating disorders in India and other low- and middle-income countries (Pike & Dunne, 2015; Vaidyanathan et al., 2019). These trends are likely compounded by this Indian age group's intense digital media exposure—more than five hours per day, primarily for social media—combined with limited digital representation and recognition of South Asians in global media (Sheikh Mohd & Shah Sumaya, 2024). By contrast, studies from high-income countries typically report lower rates, with well under 10% of individuals affected over the course of their lives, rather than at the precise moment of a study (Himmerich et al., 2024). While the findings of this study are preliminary, they underscore that eating disorders are not confined to affluent settings, but are increasingly prevalent—if not intensified—under conditions of economic development, where food offers a relatively accessible entry point into aestheticised culinary and body cultures portrayed in digital media.

In Chandigarh, the digital nutrition and fitness platform HealthifyMe emerged as a popular tool among participants, valued for its personalised training and meal plans, along with remote coaching. Initially launched in India with a clear focus on weight loss, HealthifyMe embedded the imperative to “healthify” the body, implicitly equating health with weight loss—a logic reflected in both its name and marketing strategy. “It's affordable and there are experts doing the coaching,” explained 25-year-old Manpreet during a hallway conversation about his enthusiasm for the platform (Field note, 2022, September 12). Not long after this conversation, HealthifyMe rebranded as simply “Healthify,” phasing out human coaching in favour of an AI-led experience centred on the assistant “Ria”. Nonetheless, by 2025, the platform reportedly had over 40 million users (Google Play, 2025). Ria pulls images from users' smartphone camera rolls, logs meals into an AI-powered diary with nutrient breakdown, and offers meal-time suggestions that can be ordered via redirection to Swiggy food delivery, like a “Spinach with dal, 235 Cal” for dinner (Field note, 2024, August 8)—

arguably insufficient for a full meal. These real-time nudges, presented as personalised health interventions, subtly reinforce restrictive dieting and potentially harmful behaviour modification through seemingly neutral prompts. Yet accountability is displaced onto the users via automated feedback systems. As I experienced firsthand: “Looks like you had a hearty dinner, [author name]! [Burger emoji ...] Keep up the great work towards your weight loss goal!”—even though no burger had been consumed (Field note, 2024, August 8). The combination of a shaming emoji, motivational tone, and a slim-centric platform logic enforce aspirational dietary and body image norms under the guise of encouragement, underscoring how seemingly neutral, minor digital nudges can carry normative affective weight.

In New Delhi, Instagram plays a central role mediating aspirational dietary and body image norms, particularly among the most conflicted demographic of young adults under 30. The hashtag #delhiweightloss is often paired with popular tags such as #delhifood, #delhifoodies, and #delhifoodbloggers, revealing how weight loss and culinary cultures coact in the city's digital everyday life. Much of this content is created by young adults themselves and centres on dramatic before-and-after transformations achieved through extreme dietary and exercise regimens. One reel by @transformationwithtwins proclaims, “OMG [Covering the mouth and astonished emojis] the only SECRET to My 18kg weight loss in 12 weeks”, featuring high-intensity training clips and photos of stark visual contrast to amplify the transformation narrative. Platforms like Healthify also collaborate with influencers to promote smart self-monitoring technologies, lately emphasising their branded smart scale. One such reel opens with a suggestive prompt:

“Do you feel lost in your weight loss journey? [snips fingers] Even though you're doing everything right? Calorie deficit, daily workout, 10K steps, and still the scale refuses to move. Here's the truth: weight loss isn't just about numbers on the scale [...] that's where Healthify Smart Scale changes the game. It tracks body fat, muscle mass, water weight, bone mass, and more.”

(Instagram collaboration @bhawana.tiwary and @healthifyme, 2025, July 3)

This narrative implies that not losing weight means doing something wrong, subtly equating “doing everything right” with becoming slimmer. While the message critiques metrics of weight loss, it replaces one form of reductive data-fication with another—suggesting that more numbers will lead to better self-knowledge. The comment section reflects both engagement and concern. One user, @prajapati.pallavi writes in capital letters: “ALREADY USING [smart scale and app ...] AND KEEP REVIEWING THE CALORIES DATA,” revealing a compulsive interaction with health metrics that blurs the line between self-tracking and anxiety, reinforcing the illusion of control while sidestepping the socio-technical conditions that shape this bodily distress.

In-depth interview data from Hyderabad reveal a pervasive risk among young people of striving toward digitally mediated body ideals, engaging in near-constant comparison, experiencing recurring feelings of shame or inadequacy, and internalising desires for physical transformation—often accompanied by self-punitive behaviours. Already children were affected, as homemaker Shanti with three children aged 7 to 15 noted:

“My children don't play outside anymore. They sit indoors all day, stuck to their screens, and they've moved away from our traditional food habits. All they want is Maggi. I feel everything has become so digital. They're addicted to junk food - pizza, burgers, noodles, all of that. Because of it, they're putting on a lot of weight. They also ask for Coke, but I give them sweet lemon water instead. They get bullied [by peers in school and their WhatsApp groups] and are worried about their weight.”

(Interview, 2022, October 10)

Here, digitally amplified consumption ideals replace embodied

socialisation, with weight stigma extending into childhood, fuelled by peer pressure and digital bullying. The youngest interview participant, Rumi, a closeted queer respondent who had just turned 18, described how emotional stress from on- and offline bullying, isolation, and disrupted familial care led to disordered eating as a coping strategy:

“My brother was the person who would kind of regulate me, and be like: ‘Dude, don’t eat that. That’s really unhealthy’, but when he was not there, I would completely binge. So I was kind of coping with all of that.”

(Interview, 2022, October 16)

While Rumi said “all of that”, she looked down her own body and toward the room in which her mother went during our interview—silently letting me know that our queer radar had correctly connected and that it was not prudent to further probe into this topic while family members could listen. Rumi answered the question whether the bullying had to do more with queerness or with a larger body size, without explicitly naming the first, with a nod to both points, followed by covering the face with both hands in a gesture of shame. At the other end of the spectrum, the 30-years-old and particularly slim dentist Meghana recounted over-exercising before final exams, in order to fit aspirational ideals and wear a dress she had bought online:

“As I was graduating, I was looking forward to wear that particular dress on my graduation ceremony. So I was like, I have to get more into shape. Which is why I was working out on evenings as well as mornings.”

(Interview, 2022, October 12)

This routine was not framed as joyful or health-promoting, but as a performance to make the body fit into a very small-sized piece of clothing and to meet expectations shaped by digitally mediated aesthetics. This also led her to body shaming peers, who, in her eyes, did not meet the narrow norms that she knew from bodies displayed online and clothes sold online:

“I see all my friends on the heavier side [...] They wear such things from online, what should I say? [making a lemon face] I maintain a dignified outside of mine. Sometimes I feel like, dude, I can pull it off better because I have a slimmer and leaner body.”

(Interview, 2022, October 12)

Such projections, however, deeply affect those shamed, often blaming their bodies and getting deeper into self-fulfilling negative feedback loops. The 27-year-old healthcare worker Neelima pinpointed this when reflecting on her experiences:

“It’s a social thing when you’re with friends or chatting [online ...]. I get mocked [...]. It affects your health, and your mental health as well. I did get into a very depressed phase [...]. That’s like a vicious cycle that you get trapped in. [...] First, you have body image issues, you’re sad, and [...] tend to binge on these sweets [...]. I again put on weight, and can’t break out of the circle. It’s a never ending loop.”

(Interview, 2022, October 16)

Corroborating existing literature (Dane & Bhatia, 2023; Lavis, 2015), my mixed-methods data underscores that younger digitally native people are more vulnerable to troubled corporealities. The pressure to “be perceived to be good looking, especially by men” (Hooks, 2000: 31) remains a harsh social reality, particularly for young women and queer individuals. Young men, too, are subject to a gendered, heteronormative gaze projected through food-related apps and experience constraints on their embodied gender identity and performance, though they are often positioned with greater power to participate in and shape the narrow ideals that this gaze reproduces. For example, male participants noted the growing importance and personification of male aesthetics through social food-related apps such as Instagram, highlighting the “mix of North Indian and international” influencers dominating their media

bubbles, including in South India, and converging on an emphasis on “upper body muscle development with high protein dieting”, “a good hairline”, and “trendy dressing styles and hairstyles” (Interviews, 2024, February 20–22). By contrast, they projected “more difficult” aesthetics onto women, involving more exclusionary criteria, such as being “not too skinny”—a body size knowingly pursued by “not having all foods” in order to avoid “getting fat”—, having “not a small breast” and “not a small lower body”, and wearing “not too much makeup and manicure” but also not none (ibid.).

These findings align with Bhagawandas (2023) and Schneider et al. (2018) who have shown how digital platforms, despite diversity efforts, largely reproduce hegemonic, intersectional aesthetics: slim, light-skinned, often cis-normatively gendered bodies, curated and market-standardised food imagery, and normative consumption lifestyles. Such digitally mediated and aestheticised diet culture can powerfully disrupt corporeal perceptions and embodied intersectional identity and performance, overruling intuitive eating, and unfolding across screens, schoolyards, and self-punitive negative feedback loops.

4.2. Affective digital food labor and navigating urban platform hierarchies

Building on Warde (2016) and Welch’s (2017; Welch et al., 2020) concept of teleoaffective formations, this work reveals how food consumption practices become entangled with aspirations of social mobility, while simultaneously reinforcing inequalities in care work and digital visibility. Apps and social media platforms not only circulate idealised lifestyles but also demand affective investments—particularly from women—in ways that reproduce hierarchies of class, gender, and urban space. These assemblages thus channel slow violence by embedding stratification into the affective and material organisation of food and care.

This section situates the app-food-body assemblage within the slow violence of urban hierarchies, where digital infrastructures mediate both affective labor and access to provisioning. Digital food environments in Indian cities are not only reshaping how meals are accessed but also how domestic care responsibility, culinary identity, and intersectional social belonging are negotiated. Building on Welch’s (2017; Welch et al., 2020) concept of teleoaffective formations, this analysis demonstrates how consumption practices become entangled with aspirations of social mobility, while simultaneously reinforcing inequalities in care work and digital visibility. Apps and social media platforms not only circulate idealised lifestyles but also demand affective investments—particularly from women—in ways that reproduce hierarchies of class, gender, and urban space. Within this socio-technical shift, two intertwined dimensions of slow violence emerge: first, how everyday affective food labor is superficially reconfigured through platforms like Swiggy and Zomato, while maintaining intersectional inequalities in caring with nourishment; and second, how urban residents navigate these inequalities in the platform-mediated physical and affective geographies of food environments. Across both, the app-food-body assemblage mediates slow forms of violence in the affective and material organisation of nutrition and care in cities—not through overt harm, but through cumulative exclusion, exhaustion, and emotional disciplining.

4.2.1. Affective digital food labor

Providing food remains an elemental act of care in Indian culture across regional context, predominantly associated with women—especially mothers and grandmothers. In Hyderabad—the most conservative of the three study sites—patriarchal norms continue to shape domestic expectations profoundly, even for the growing number of women pursuing full-time paid work and increased autonomy (Shankar, 2018). Anita, a young female entrepreneur, reflected on how her full-time employed mother still sent her home-cooked food to work “five to six days” in a week (Interview, 2022, October 7). She described this as a “hard working mentality”—one she was uncertain she could or would

want to replicate (ibid.). Her hesitation stemmed from the emotional and temporal strain of juggling professional obligations with implicit expectations of women shouldering private caregiving (see Roy, 2020): “I cannot be as active as her for some good reason [...] this is a generational difference,” she explained, noting that even her mother had become less engaged in food care compared to her grandmother (ibid.).

Despite female labor force participation stagnating at around 30% on the national level (Ministry of Labour and Employment, 2023), employment outside the home has afforded some women greater financial autonomy—but not freedom from gendered responsibilities around food labor at home. The infrastructural and social transformations necessary for redistributing domestic tasks, especially nutrition-related care, have not kept pace with women’s entry into the labor market. Fitan, a 44-years-old father of a teenage boy and girl in Hyderabad, observed that the women in his household had “far less time for their own health,” as they were constantly absorbed by work or school and daily domestic routines, above all meal preparation (Interview, 2024, February 21). Yet, his account offered no reflection on his own role in the household division of food labor—underscoring how normalised such gendered asymmetries remain.

Another gendered instant of slow violence is the affective labor of “pleasing through taste” (Roy, 2020)—prioritising and pleasing the culinary preferences of others over ones’ own—which is largely feminized. This constitutes a sensory and emotional sacrifice expected from women—a disavowal of one’s own food pleasures. Forty-year-old Pandita from Hyderabad described the long-term psychological cost:

“[...] women are constantly stressed, because at home with your family, you are trained to please the future husband and the in-laws. So you are never yourself. You never know who you are. You’re never given a chance to be what you are and explore what you like.”

(Interview, 2022, September 21)

Against this backdrop, the rise of food delivery platforms like Swiggy and Zomato appears to offer urban middle-class households a means of redistributing nutrition labor and exploring tastes. While app-based ordering externalises parts of food shopping and the act of cooking, the more invisible and emotionally loaded tasks—coordinating family preferences, setting the table, managing deliveries, and cleaning up—typically remain with women. Men, by contrast, often control the food delivery apps, performing a kind of gendered tech-savviness while retaining the authority to gate-keep the final order. An example of this is Pandita preparing a lavish vegetarian South Indian lunch, and dialoging with her husband to hand his phone to arriving youngsters wanting to eat meat, in order for them to place a Swiggy order—initially a serving of 16 different chicken pieces, which the husband adjusted to a ten piece combo (Field note, 2022, October 9). The partial outsourcing of cooking thus reconfigures rather than dissolves gendered divisions of food care, embedding them within new platform-mediated routines.

Out of the three focus groups in Chandigarh, two chose food delivery and one opted for a restaurant visit. None chose to use the allotted budget to buying high quality ingredients and cook together. The youngest group cited time constraints as main reason for choosing delivery, while the mid-aged group settled on delivery after failing to agree on a restaurant that suited everyone’s preferences. The oldest group chose a restaurant “because it sounded more special” (Interview, 2024, August 7). For the delivery groups, participants were asked to share their food preferences in a WhatsApp group chat so the order could be placed shortly before their arrival. In the youngest group, coordination fell to the only female participant, who took on the affective labor of navigating diverse preferences and curating a shared order. In the mid-aged all-male group, the conversation began with scheduling: one participant proposed 1 PM to accommodate afternoon work obligations. Sandeep, an IT specialist, objected—“that’s too early for lunch. I generally have lunch after 2pm daily”—but relented, adding, “okay fine then. But my restaurant choice will be O Chicken.” When reminded that two members were vegetarian, he defended his preference: “Actually I am a gym

person. And diet matters a lot for me.” Another participant suggested splitting the group and going to different restaurants, tagging me—a female author—with an @, to mediate the situation and coordinate delivery food orders from various restaurants to a neutral interview setting (WhatsApp, 2024, August 8).

This episode illustrates how nutrition is increasingly outsourced to digital infrastructures, obscuring gendered affective food labor. Among those who can afford app-based delivery—and are willing to sidestep traditional Hindu concerns about purity in food preparation (Staples, 2020)—affective nourishment becomes more abstract, filtered through negotiation of digital menus and brand interfaces rather than direct sensory engagement. While this externalisation may ease some domestic burdens, it also shifts attentiveness away from food and into algorithmic systems that re-entrench social hierarchies. For instance, a female-coded Swiggy profile received push messages promoting “Guiltfree” snacks and salads that promised to “tip the scale in your favour!”—while male-coded profiles received notifications for “GrowFit” meals emphasising muscle gain and “high-protein” goals (Fieldnote, 2023, July 17). These gendered nudges reinforce normative ideals of wellness and body discipline, embedding care expectations into everyday digital interactions. What appears as convenience thus participates in a slow violence of digital affect: reconfiguring and fomenting gendered affective food labor, disciplining bodies, and shaping exclusion through seemingly benign consumption cues.

4.2.2. Navigating urban platform hierarchies

The intersectional inequalities in affective digital food labor are embedded within regional “affective ecologies” (Puig de la Bellacasa, 2017) of context-specific urban environments (see Pillai, 2022). As individual food environments shift through digital mediation, so too do the emotional and symbolic structures through which intersectional gender, class, and caste relations are enacted and negotiated. Delivery platforms like Swiggy and Zomato recalibrate these affective geographies in the city—shaping what is available, and who can access, enjoy, or emotionally attach to particular fares and places.

My interviews in Hyderabad reveal that food apps reinforce normative cultural hierarchies by amplifying the availability of dominant—often upper-caste Hindu—cuisines while marginalising others. This hierarchisation of ethnocultural foods (see Warde, 2016: 162) is tied to dishes that invoke imaginaries of class status and sophistication. Hindu participants reported no difficulties in easily finding festival-specific items on delivery platforms, like Fitan stating “it’s now always available on there” (Interview, 2024, February 21), though upper-caste families emphasised preparing them at home as part of tradition. In contrast, Muslim participants struggled to find emblematic dishes such as organ meat curries or buffalo-based preparations, like 29-years-old Salim carefully phrasing:

“I won’t find culture food there, it’s only home-cooked. There is this common Sheep Kalla [liver] for Ramzan [Ramadan] that is not available anywhere on Swiggy and Zomato, it’s even difficult to find in restaurants.”

(Interview, 2024, February 20)

During digital ethnographic fieldwork on Swiggy in Hyderabad, I was similarly unable to locate dishes featuring animal proteins beyond mutton, chicken, and fish muscle meat. Availability of minority culture dishes varied significantly by the caste and class composition of the neighbourhood used for search, suggesting that algorithmic curation reflects and reproduces local social hierarchies. Such filtering constitutes a subtle yet powerful form of cultural erasure: flattening culinary diversity and restricting access to identity-affirming foods beyond Hindu majoritarian norms.

The mid-aged Mariah recalled how neighbours inspected garbage bins for traces of perceived impurity following Christian celebrations: “They [the neighbours] comment on the kind of bones they find in our

bins,” she said with disbelief (Field note, 2024, February 20). Muslim participants reported similar barriers, particularly for renting property in mixed neighbourhoods. In one case, Aisha, a Muslim woman in her 30s, had her application to rent a commercial space declined during an incoming WhatsApp witnessed by the author. The landlord cited concerns about the smell of meat preparation. Aisha explained that she now prefers to disclose her religion in such digital interactions to avoid face-to-face confrontation and tone down the degree of experienced violence (Field note, 2024, February 20). These two accounts highlight how everyday urban food environments can become sites of quiet surveillance and (digitally mediated) exclusion.

Mental maps collected in Hyderabad offer insight into how such affective urban ecologies are lived and gendered. Two participants—pseudonymized as Raka and Vineet—anchor the analysis. They share similar socio-economic profiles: both are in their mid-30s, from urban, middle-class, upper-caste Hindu backgrounds.

Raka's map (see Fig. 2) reveals how gendered power dynamics shape—and often constrain—spatial and affective relations to individual food environments. While Raka attempted to list restaurants, her husband intervened, wanting to complete the task for her. Once he stepped back, she hesitated, appearing insecure about identifying her own food spaces. Raka's final map referenced only two locations: her kitchen and a vague category labeled “restaurants,” both tucked into a corner of the page. The rest of the sheet remained empty—symbolising not just spatial constraint, but a deeper affective compression.

In contrast, Vineet's map (see Fig. 3) exudes confidence and expansiveness. He eagerly plotted a wide range of restaurants, supermarkets, and pubs, describing each in rich sensory detail. His home, marked in capital letters, anchors the map alongside his “mom”—noted as the central figure in his food environment. Another node, “my aunt's place,” again tied food care to female relatives. Vineet's affective geography shows culinary pride, sensory pleasure, and freedom of movement across the city.

Comparing these maps reveals not only spatial compartmentalisation but also deep affective stratification in urban food environments—underscoring stark asymmetries in the reach of nutritional offer, mobility, entitlement, and pleasure across cities and the need for concerted efforts to achieve urban socio-ecological food justice

transformations (see Trombini & Motta, 2025). Raka's modest representation contrasts with Vineet's outward-reaching layout. These differences expose particularly the gendered contours of space, agency, and emotional connection within urban food environments. Yet, digital platforms offer partial disruptions to these patterns. For middle- and upper-class women, apps can expand access to culinary options without crossing restrictive spatial thresholds. As Patgiri (2022) notes, “ordering in” allows women to symbolically and practically extend their food environment while remaining within the domestic sphere. This reconfiguration alters the affective terrain in which nourishment is experienced, shared, and cared with.

However, this digital mobility remains ambivalent. While it offers exploration and convenience, it often detaches practices from communal and place-based contexts (Baresi, 2025). The critique of “foods from nowhere” (Campbell, 2009; Guptill et al., 2016) applies: provenance, relational care, and embodied engagement are increasingly displaced by algorithmic suggestions and isolated consumption.

Together, these accounts show how slow violence unfolds affectively through digital urban infrastructures—not via sudden shocks but through cumulative exclusions, constrained desires, and the subtle disciplining of care. Drawing on Welch et al. (2020), we see how food platforms produce teleoaffective formations in which control and aspiration become moral imperatives aligned with upper-class consumer norms. Influencer cultures (Banerjee et al., 2020; Baviskar, 2018) amplify these norms, narrowing the affective range around food: what care is valued, who may enjoy without guilt, and who is expected to serve invisibly. As Puig de la Bellacasa (2017) reminds us, care and affect are never neutral—they are situated in unequal capacities to act, be seen, and be nourished. In India's urban food environments, digital platforms do not merely deliver meals—they mediate how people care, move, belong, and are seen. They reshape the very conditions under which people feel emotionally and physically nourished—or not—in the affective geographies of cities.

4.3. Aspirational consumption of platformed ultra-processed foods

This section traces the slow violence of processed food harms as they materialise through app-food-body assemblages. Delivery platforms and

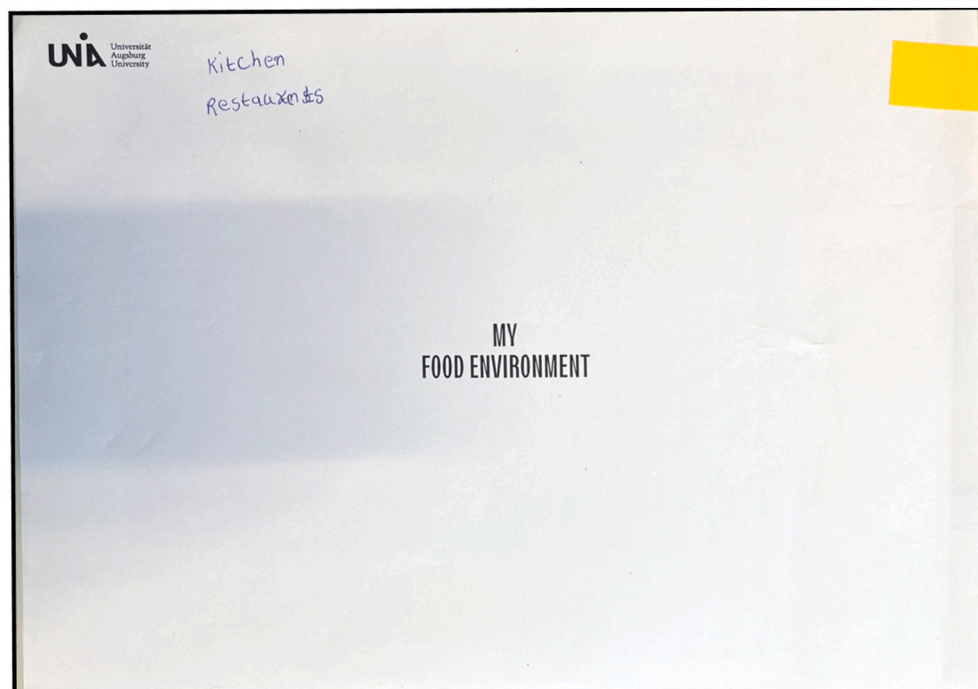


Fig. 2. Raka's food environment mental map.

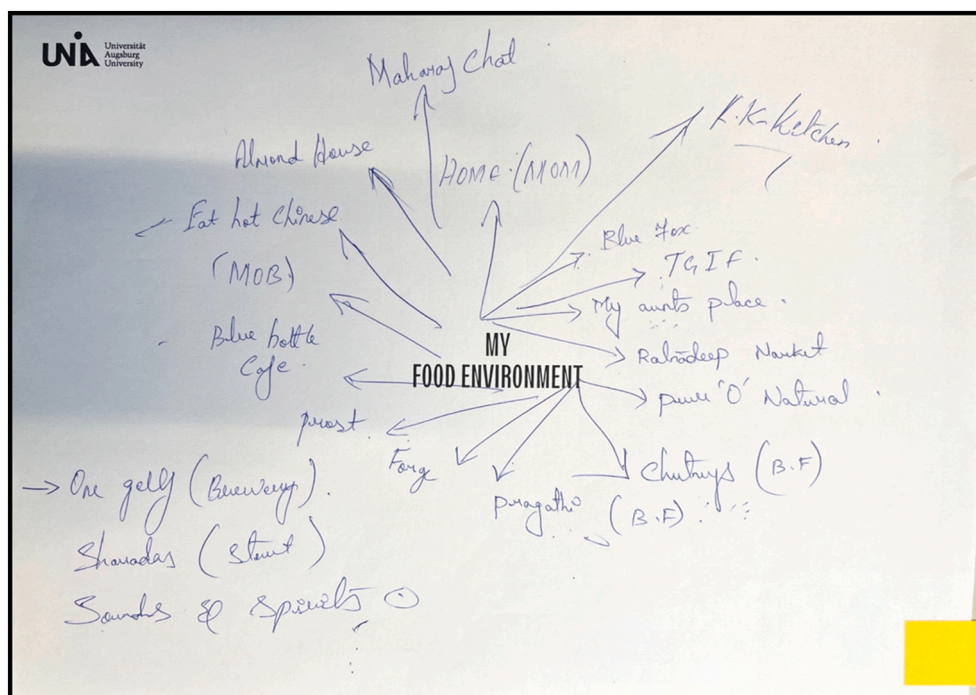


Fig. 3. Vineet's food environment mental map.

social media normalise ultra-processed products as symbols of modern convenience and aspiration, while obscuring their long-term bodily consequences. Following Nixon's (2011) theorisation of slow violence, I argue that these harms accumulate gradually, favoured by weak regulation, fragmented accountability, and algorithmic promotion, making aspirational food consumption a key site where digital infrastructures intersect with toxic materialities in ways that enact slow violence in Indian cities.

Across mapping exercises, interviews, and questionnaire responses, participants consistently prioritised foods that were affordable, convenient, socially accepted, and tasty—preferences that digital marketing strategies in India have learned to exploit, particularly through the promotion of ultra-processed and delivery-friendly options. Although these preferences could describe healthier options elsewhere, in India's platform-driven urban middle-class food environments, they are increasingly satisfied through algorithmically optimised foods—cheap, shelf-stable, and visually appealing—hallmarks of ultra-processed items. Digital marketing thus aligns with aspirational consumption by offering fast, flavourful, and symbolically modern options that may not align with nutritional quality. Many of these items, especially those delivered via apps, are ultra-processed and most are produced within agrochemical-intensive systems that dominate India's post-Green Revolution food economy (Shiva, 2021; Pesticide Atlas, 2022).

According to the food environment mapping in Hyderabad, nearly none of the participants accessed organically grown produce. Instead, they relied on conventional vegetables from *mandis* [neighbourhood markets] and corner stores, pre-packaged items from supermarkets, and app-delivered meals or last-minute groceries. These products were described as “chemical,” “oily,” or “artificial”, as tech consultant Tanya put it during an interview in Chandigarh (2024, August 6). Yet many participants also expressed skepticism toward certified organic alternatives—distrusting their authenticity and balking at their high prices. Manisha, a retired fashion designer in Hyderabad, summarised this ambivalence:

“Is it really organic? Just because of the label, I can't be sure it's better than what I get at my *mandi*—much closer and affordable.”

(Interview, 2024, February 21)

Despite health concerns, processed platform foods often held aspirational value. As Müller-Hansen et al. (2025) emphasise, aspirational eating is a paradoxical mode of consumption: it promises class transcendence and aesthetic alignment with urban modernity, even as it delivers edibles that may erode health and deepen structural vulnerability over time. In this study, platform foods were frequently framed as indulgent for cravings, time-saving, or impressive to guests—especially among women balancing work and caregiving. Even in conservative Brahmin families in Hyderabad, such as Sushila's—usually concerned with notions of preparation purity—ultra-processed items have been integrated into food practices:

“The children have cravings, so weekly they will create a fuzz saying we want pizza or some *chaat* [snack] items. So the father goes and [...] brings the parcel.”

(Interview, 2022, September 19)

Uma, a young pharmacist gave a bluntly honest account, foregrounding the convenience and cravings tied to ultra-processed foods:

“I mostly order [groceries] over Swiggy. Knowing that this is not the most fresh available, they bring it up here [to a fifth floor apartment], it's for a week, I store it in the fridge. And then I take one [additional Swiggy food order] per day. [...] When it's about craving, I just eat it. I don't care where it is coming from, who is making it and whatever it is. I just want to eat, I'll eat it.”

(Interview, 2022, September 21)

Many participants raised concerns about the ingredients in ultra-processed products, particularly those ordered via apps. Homemaker Shanti, for instance, named “excess salt, sugar, simple carbs, poor-quality oils, and preservatives” as core worries (Interview, 2022, October 10). Platform food was not only a shortcut to nourishment—it was also a performance of taste, care, and economic participation. This is precisely where slow violence takes root: harm becomes sedimented in the body not through spectacular poisonings, but through everyday ingestion of ultra-processed substances (see Monteiro et al., 2019),

filtered through the aspirations circulated by digital platforms.

The burdens of nutritional toxicity are uneven (see [Shiva, 2021](#)). Participants from all three study sites voiced worry about the long-term impacts of processed food on fertility, weight, or child development. While Manisha, the retired fashion designer from Hyderabad, felt trapped between “bad” but convenient options and “better” but unaffordable or inaccessible ones (Interview, 2024, February 21), young tech consultant Tanya from Chandigarh felt confident about finding “delicious vegetarian comfort food” (Interview, 2024, August 6). In Delhi, the lack of ingredient transparency was stated to further compound the ambiguity around processed items (Field note, 2022, September 9), as a clinical cardiologist argued during a conversation prior to a consultation I had scheduled with the Food Safety and Standards Authority of India (FSSAI)—India’s main regulatory body for food labelling, additives, and ingredient safety—which foregrounded their efforts toward innovative labelling and ingredient transparency during this in-person and a follow-up online meeting.

Ultra-processed platform foods emerge as part of what [Müller-Hansen et al. \(2025\)](#) call a “contradictory yet interconnected teleoaffective formation” under the regime of aspirational eating—symbolising modern care and social mobility while also circulating toxins through food environments and bodies. Finally, as [Bhagwandas Bhagawandas \(2023\)](#) and [Guthman \(2011\)](#) have foregrounded, resisting hegemonic food and beauty norms is both politically urgent and somatically exhausting.

5. Discussion

This study conceptualises creeping, normalised harms in digital food environments as a socially produced relation of mundane violence ([Bork-Hüffer et al., 2023](#))—understood not as spectacle but as gradual and distributed “slow violence” ([Nixon, 2011](#))—by framing app interactions, following [Lupton \(2018\)](#), as App–Food–Body assemblages that couple bodily self-governance, urban mobilities, and food practices. Although digital food environments are widely acknowledged as increasingly relevant, their embodied and power-laden dynamics remain under-theorised (cf. [Goodman & Jaworska, 2020](#); [Granheim et al., 2022](#)). The analysis addresses three gaps in the literature: (1) the dominance of instrumental aesthetics and effectiveness logics in app research at the expense of affect, normativity, and unintended consequences such as shame and ambivalent agency ([Banerjee et al., 2020](#)); (2) the still limited, culturally sensitive research on eating disorders in India despite rising thinness ideals and body dissatisfaction in urban media contexts ([Vaidyanathan et al., 2019](#)); and (3) the politically contested and weakly standardised field of uneven toxicity exposure in platformed ultra-processed foods across South Asia ([Lane et al., 2024](#)). This article brings these strands together through a sensitively comparative urban lens ([Datta & Basu, 2024](#); [Kern, 2020](#); [Robinson, 2022](#)) and a violence- and power-critical approach to internet research ([Bellanova et al., 2021](#); [Kalema, 2026](#); [Noble, 2018](#); [Pybus & Coté, 2024](#); [Recuero, 2024](#); [Safransky, 2020](#); [Teo, 2025](#)), responding to gaps identified in research on urban India by [Truelove and Ruszczyk \(2022\)](#) and showing how slow violence is contextually modulated across Hyderabad, Chandigarh, and New Delhi. Theoretically, it situates digital food environments as mundane, everyday practices of violence across entangled online/offline spaces and non-linear temporalities (cf. [Bork-Hüffer et al., 2023](#)), advances an implicit assemblage perspective in the sense of [McFarlane \(2011\)](#) that treats platforms as urban-material formations of power, and highlights digital food spaces as gendered care and temporal regimes ([Sinha et al., 2024](#)). The findings point to the black box of urban food-app practices as intervention point: (a) for platform designers, implying the need for good data hygiene, transparent and pluralistic algorithmic governance, and openings to boost and reward do-no-harm-practices; (b) for urban policymakers and urban planners, highlighting the importance of diverse data centres and contextual protection and regulation, accountability standards, and rewarding mechanisms that boost regionally adapted pluralistic

practices of platform designers, as well as context-sensitive definitional frameworks around advertisement of platformed ultra-processed foods; and (c) for scientists and society, they provide a power-sensitive analytical framework to assess cumulative health risks and to inform more equitable digital food governance both on a regional/urban and national/international level, while drawing attention to the (methodological) limits posed by largely opaque algorithmic platform logics.

6. Conclusion: mundane violence in diverse digital-urban food environments

Across three intersecting domains—disciplining digital aesthetics, urban platform hierarchies, and platformed nutritional toxicity—the app-food-body assemblage enacts slow violence and renders the subtle, everyday harms embedded in socio-technological interaction ordinary practices that are easily overlooked. These harms are routinised, yet deeply consequential and cumulative: embedded in branding, algorithm and interface design, and consumer affect, they become corporeally absorbed in the form of (1) aestheticisation of food consumption through digital platforms, amplifying internalised shame and disordered eating; (2) urban food hierarchies that are algorithmically obscured and devalue care and ethnic cuisines; and (3) toxic food harms through regular consumption of platformed ultra-processed products, digitally incentivised as aspirational and convenient.

The analysis makes three central contributions. First, it posits the app-food-body assemblage as a relational framework linking embodied practice, digital design, and urban inequality. Second, it demonstrates that food platforms actively configure affective experience, bodily norms, and exposure to harm, rather than merely reflecting existing structures. Third, it shows that platform-mediated harms are uneven and contextually modulated: design, uptake, and everyday meaning differ by regional culture, urban infrastructure, and social norms, requiring approaches attuned to differentiation.

These processes manifest differently in the three urban Indian study regions. Although the data are not statistically representative, they are methodologically situated and carefully contextualised. In an unconventional yet deliberate structural move, the article concludes with three empirical vignettes that situate the key findings within lived urban contexts.

Among often close-knit and intimately regulating family ties in Hyderabad, 37-year-old Reshma reflected on how spousal expectations shaped her corporeality: “My husband prefers somebody who is lean and I belong to the large frame category” (Interview, 2022, September 26). Despite acknowledging the limits imposed by this bodily ideal, she recalibrated her food habits—avoiding heavy festival meals and integrating digital monitoring through a smart scale and smartwatch. Her practices exemplify how familial pressures intersect with digital self-surveillance to regulate and discipline particularly women’s bodies, rendering digital food a contested site of both conformity and constraint.

Among the relatively affluent residents of the Le Corbusier-planned Chandigarh, Tanya, a tech consultant in her late twenties, described avoiding “greasy dishes” to maintain what she called a “healthy body” (Interview, 2024, August 6). She relied on a narrow set of food delivery options from restaurants she knew physically and considered neat and clean. Her account speaks to the spatial filtering of digital platforms, where urban food geographies are shaped through algorithmic predictability, trust in place-based hygiene, and normative body imaginaries. “Now, a healthy body is a slim body,” she noted, pausing before adding, “The media is very much demanding for that body image, you know?”. Tanya’s account continued over mobile messaging, where she stated “Sometimes logging a ‘healthy’ choice feels rewarding, but other times not meeting a goal or seeing idealised meals can create pressure or self-judgement. I think many people can relate to this mix of emotions” (WhatsApp, 2025, September 14), illustrating how aspirational food choices are conditioned and hierarchised by the convergence of urban modernity narratives, platform governance, and visual culture.

Among the digitally highly connected yet self-regulating and disembodied rhythms incentivising ultra-processed food consumption in the fast-paced capital city New Delhi, ethnographic work in revealed restaurant spaces increasingly geared toward digital dispatch. At one venue in Gurgaon district, a couple observed the stream of takeout orders with ironic detachment: “They’re all sitting at home, waiting to post a photo of their boneless chicken on Instagram” (Field Note, 2022, September 9). Their remark, tinged with sarcasm and quiet disdain, hinted at a critique of disembodied food consumption—eating as image, severed from the social and sensory geography of the restaurant. The choice of highlighting “boneless chicken”—both a cosmopolitan marker and a subtle jab at Western processed food conformity—signals how items acquire cultural valence through digital circulation. This field observation captures how platform-mediated environments privilege aesthetics over spatial presence and multi-sensory engagement, subtly remapping nutritional meanings in urban everyday life.

Finally, urban and regional interventions in digital food platforms can contribute to mitigating slow violence by prioritising diverse culinary representations, reducing emphasis on global aestheticised norms, and co-creating responsive interfaces that support bodily autonomy and inclusive care practices. Recognising the multidirectional power flows in app-food-body assemblages—between enabling and disciplining, surveilling and gratifying—can inform whose bodies are valorised, whose labor is marginalised, and whose risks accumulate over time. The study shows that app-food-body assemblages are not neutral intermediaries but active urban sites where hope, aspiration, and harm intersect, demanding sustained critical engagement with digital-embodied consequences of slow violence for shaping more equitable, healthy, and pleasurable urban food environments.

CRediT authorship contribution statement

Merle Müller-Hansen: Writing – review & editing, Writing – original draft, Methodology, Investigation, Formal analysis, Data curation, Conceptualization.

Ethical approval

This study has received ethical approval by the German Potsdam Institute for Human Nutrition (DIfE) as well as the Institutional Ethical Committee at the National Institute of Nutrition India (ICMR-NITM/I HEC I2022-I AN I 004).

Declaration of Generative AI and AI-assisted technologies in the writing process

During the preparation of this work the author used ChatGPT in order to improve the readability during the final language editing only. After using this tool, the author reviewed and edited the content as needed and takes full responsibility for the content of the publication.

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References

- Banerjee, P., Mendu, V. V., Korrapati, D., & Gavaravarapu, S. M. (2020). Calorie counting smart phone apps: Effectiveness in nutritional awareness, lifestyle modification and weight management among young Indian adults. *Health Informatics Journal*, 26(2), 816–828.
- Baresi, U. (2025). Neo-colonial intelligence: How AI risks reinforcing spatial injustices in a digitally divided world. *Cities*, 166, Article e106232. <https://doi.org/10.1016/j.cities.2025.106232>
- Baviskar, A. (2018). Consumer citizenship. *Gastronomica*, 18(2), 1–10.
- Bellanova, R., Irion, K., Lindskov Jacobsen, K., Ragazzi, F., Saugmann, R., & Suchman, L. (2021). Toward a critique of algorithmic violence. *International Political Sociology*, 15(1), 121–150. <https://doi.org/10.1093/ips/olab003>
- Bhagawandas, A. (2023). *Ugly: Giving us back our beauty standards*. London: Blink Publishing.
- Bork-Hüffer, T., Mahlknecht, B., Markl, A., & Kaufmann, K. (2023). Digital geographies of mundane violence. *Erdkunde*, 77(3), 169–194.
- Brydolf-Horwitz, R. (2022). Embodied and entangled: Slow violence and harm via digital technologies. *EPC: Politics and Space*, 40(2), 391–408.
- Buch, E., & Staller, K. (2011). The feminist practice of ethnography. In S. Hesse-Biber, & P. Leavy (Eds.), *Feminist research practice*. Thousand Oaks: Sage Publications.
- Campbell, H. (2009). Breaking new ground in food regime theory: Corporate environmentalism, ecological feedbacks and the ‘food from somewhere’ regime? *Agriculture and Human Values*, 26(4), 309–319.
- Dane, A., & Bhatia, K. (2023). The social media diet: A scoping review to investigate the association between social media, body image and eating disorders amongst young people. *PLoS Glob. Publ. Health*, 3(3), Article e0001091.
- Datta, A. (2020). The “smart safe city”: Gendered time, speed, and violence in the margins of India’s urban age. *Annals of the American Association of Geographers*, 110(5), 1318–1334.
- Datta, A. (2021). *Gender, space and agency in India*. Oxon: Routledge.
- Datta, A., & Basu, S. (2024). Women’s work as citymaking. In L. Peake, A. Datta, & G. Adeniyi-Ounyan (Eds.), *Handbook on gender and cities*. <https://doi.org/10.4337/9781786436139.00037>
- Deb, N. (2023). Slow violence and the ‘Gas Peedit’ in neoliberal India. *Social Problems*, 70(4), 1085–1103.
- DeLoughrey, E., Didur, J., & Carrigan, A. (2015). *Global ecologies and the environmental humanities: Postcolonial approaches*. Routledge.
- Expert Market Research. (2025, November 17). *India online food delivery market growth analysis - forecast trends and outlook (2025–2034) [title indicates 2025–2034, but full report covers 2018–2034] [report]*. Expert Market Research. <https://www.expertmarketresearch.com/reports/india-online-food-delivery-market>.
- Ghosh-Jerath, S., Khandpur, N., Kumar, G., Kohli, S., Singh, M., ... Reddy, K. S. (2024). Mapping ultra-processed foods (UPFs) in India: A formative research study. *BMC Public Health*, 24, 2212. <https://doi.org/10.1186/s12889-024-19624-1>
- Goodman, M., & Jaworska, S. (2020). Mapping digital foodscapes: Digital food influencers and the grammars of good food. *Geoforum*, 117, 183–193.
- Google Play. (2025, July 6). Healthify AI weight loss coach. <https://play.google.com/store/apps/details?id=com.healthifyme.basic&pli=1>.
- Granheim, S. I., Løvhaug, A. L., Terragni, L., Torheim, L. E., & Thurston, M. (2022). Mapping the digital food environment: A systematic scoping review. *Obesity Reviews*, 23(1), Article e13356.
- Guptill, A., Copelton, D., & Betsy, L. (2016). Global food: From everywhere and nowhere. In A. Guptill, D. Copelton, & B. Lucal (Eds.), *Food & society*. UK: Polity Press.
- Guthman, J. (2011). Weighing. In *Obesity, food justice, and the limits of capitalism*. Berkeley: University of California Press.
- Hesse-Biber, S. (2011). The practice of feminist in-depth interviewing. In S. Hesse-Biber, S. Nagy, & P. Leavy (Eds.), *Feminist research practice: A primer*. Thousand Oaks: Sage.
- Himmerich, H., Davies, H., Tessema, S. A., & Treasure, J. (2024). The evolving profile of eating disorders and their treatment in a changing and globalised world. *The Lancet*, 403(10445), 2671–2675.
- HLPE. (2017). *Nutrition and food systems - A report by the high level panel of experts on food security and nutrition*. Rome: UN Committee on World Food Security.
- Hooks, b. (2000). *Feminism is for EVERYBODY: Passionate politics*. London: Pluto Press.
- John, K. T. (2023). Digital disruption: The hyperlocal delivery and cloud kitchen driven future of food services in post-COVID India. *International Hospitality Review*, 37(1), 161–187.
- Kalema, N. L. (2026). The banality of global algorithmic violence: Global digital transformation’s cultivation of predatory algorithmic governance. In *UCL Institute for innovation and public purpose, working paper series (IIPP WP 2026-02)* (ISSN 2635-0122).
- Kaur-Gill, S., & Dutta, M. (2017). Digital ethnography. In J. Matthes, C. Davis, & R. Potter (Eds.), *The international encyclopedia of communication research methods*. Hoboken: John Wiley & Sons.
- Kern, L. (2020). *Feminist city: Claiming space in a man-made world*. Verso.
- Lane, M., Gamage, E., Du, S., Ashtree, D. N., McGuinness, A., ... Marx, W. (2024). Ultra-processed food exposure and adverse health outcomes: Umbrella review of epidemiological meta-analyses. *BMJ*, 384, Article e077310. doi:10.1136/.
- Lavis, A. (2015). Careful starving: Reflections on (not) eating, caring and anorexia. In E.-J. Abbots, A. Lavis, & L. Attala (Eds.), *Careful eating - Bodies, food and care*. London and New York: Routledge.
- Light, B., Burgess, J., & Duguay, S. (2018). The walkthrough method: An approach to the study of apps. *New Media & Society*, 20(3), 881–900. <https://doi.org/10.1177/1461444816675438>
- Lupton, D. (2018). ‘I just want to be done, done, done!’ Food tracking apps, affects, and agential capacities. *Multimodal Technologies and Interaction*, 2(2), 29.

- Lupton, D. (2019a). *Data selves: More-than-human perspectives*. Cambridge & Medford: Polity Press.
- Lupton, D. (2019b). Toward a more-than-human analysis of digital health: Inspirations from feminist new materialism. *Qualitative Health Research*, 29(14), 1998–2019. <https://doi.org/10.1177/1049732319833368>
- Lupton, D. (2020). Understanding digital food cultures. In D. Lupton, & Z. Feldman (Eds.), *Digital food cultures* (pp. 1–16). Routledge.
- Lupton, D. (2021). “All at the tap of a button”: Mapping the food app landscape. *European Journal of Cultural Studies*, 24(6), 1360–1381. <https://doi.org/10.1177/13675494211055732>
- Mayring, P. (2000). Qualitative content analysis. *Forum Qualitative Sozialforschung [Forum Qualitative Social Research]*, 1(2), Article 20.
- McFarlane, C. (2011). Assemblage and critical urban praxis: Part one. *City*, 15(2), 204–224. <https://doi.org/10.1080/13604813.2011.568715>
- Ministry of Labour and Employment. (2023). Female labour utilization in India. Government of India, report by the Directorate General of Employment, 2025, July 6 <https://tinyurl.com/yc5m5x8m>.
- Mol, A. (2021). *Eating in theory*. Duke University Press.
- Monteiro, C. A., Cannon, G., Levy, R. B., Moubarac, J. C., Louzada, M. L., Rauber, F., et al. (2019). Ultra-processed foods: What they are and how to identify them. *Public Health Nutrition*, 22(5), 936–941. <https://doi.org/10.1017/S1368980018003762>
- Mudunna, C., Weerasinghe, M., Tran, T., Antoniadis, J., Romero, L., Chandradasa, M., & Fisher, J. (2025). Nature, prevalence and determinants of mental health problems experienced by adolescents in south Asia: a systematic review. *The Lancet Regional Health - Southeast Asia*, 33, 100532.
- Müller-Hansen, M., Addu, K., & Keck, M. (2025). From the “wealthy-healthy-chubby” nexus to “outside foods”: Changing food consumption practices in India and Mexico. *Social & Cultural Geography*. <https://doi.org/10.1080/14649365.2025.2498944>. online first.
- Nagar, I., & Virk, R. (2017). The struggle between the real and ideal: Impact of acute media exposure on body image of young Indian women. *SAGE Open*, 7(1), Article 2158244017691327. <https://doi.org/10.1177/2158244017691327>
- Nixon, R. (2011). *Slow violence and the environmentalism of the poor*. Cambridge, Massachusetts, London: Harvard University Press.
- Noble, S. (2018). *Algorithms of oppression: How search engines reinforce racism*. New York, USA: New York University Press. <https://doi.org/10.18574/nyu/9781479833641.001.0001>
- Patgiri, R. (2022). Changing food habits of urban middle class youth in India: Ordering in. *South Asia Research*, 42(3), 327–342.
- Pesticide Atlas. (2022). Pesticide Atlas - Facts and figures about toxic chemicals in agriculture. Joint publication by Heinrich Böll Stiftung, Friends of the Earth Europe, BUND, and Pesticide Action Network Europe [2025, July 6] <https://tinyurl.com/ypawsuu5>.
- Pike, K. M., & Dunne, P. E. (2015). The rise of eating disorders in Asia: A review. *Journal of Eating Disorders*, 3, Article 33. <https://doi.org/10.1186/s40337-015-0070-2>
- Pillai, M. (2022). *Affective feminisms in digital India*. London: Routledge India.
- Puig de la Bellacasa, M. (2017). *Matters of care: Speculative ethics in more than human worlds*. Minneapolis: University of Minnesota Press.
- Pybus, J., & Coté, M. (2024). Super SDKs: Tracking personal data and platform monopolies in the mobile. *Big Data & Society*, 11(1). <https://doi.org/10.1177/20539517241231270>
- Recuero, R. (2024). The platformization of violence: Toward a concept of discursive toxicity on social media. *Social Media + Society*, 10(1). <https://doi.org/10.1177/20563051231224264>
- Robinson, J. (2022). *Comparative urbanism: Tactics for global urban studies*. Wiley.
- Roy, P. (2020). Gender, time use, and food consumption in India. *Gender, Technology and Development*, 24(3), 378–396.
- Safransky, S. (2020). Geographies of algorithmic violence: Redlining the smart city. *International Journal of Urban Regulation Research*, 44, 200–218. <https://doi.org/10.1111/1468-2427.12833>
- Schneider, T., Eli, K., Dolan, C., & Ulijaszek, S. (2018). *Digital food activism*. Oxfordshire and New York: Routledge.
- Schurr, C., Marquardt, N., & Miliz, E. (2023). Intimate technologies: Towards a feminist perspective on geographies of technoscience. *Progress in Human Geography*, 0(0), 1–23.
- Shankar, S. (2018). Situating women’s conferences of early 20th century: Hyderabad state: Women’s activities and growth of left ideologies. *UGC Journal Research Directions*, 9(12), 121–127.
- Sheikh Mohd, S., & Shah Sumaya, J. (2024). A cross-sectional study of mental health effects of excessive screen time and social media use among Indian adolescents and young adults. *Journal of Nature and Science of Medicine*, 7(3), 210–217. https://doi.org/10.4103/jnsn.jnsn_37_24
- Shiva, V. (2021). *Philantro-capitalism and the erosion of democracy*. Santa Fe: Synergetic Press.
- Singh, S., Rahul, K., Paliwal, M., Wani, I. A., & Suri, S. (2025). Gendering the digital divide: A systematic review of women’s digital inclusion challenges and emerging research directions. *Digital Transformation and Society*, 4(4), 503–531. <https://doi.org/10.1108/DTS-04-2025-0083>
- Sinha, A., Sedai, A. K., Rahut, D. B., & Sonobe, T. (2024). Well-being costs of unpaid care: Gendered evidence from a contextualised time-use survey in India. *World Development*, 173, Article 106419. <https://doi.org/10.1016/j.worlddev.2023.106419>
- Sruthi, K. G., John, S. M., & David, S. M. (2023). Assessment of obesity in the Indian setting: A clinical review. *Clinical Epidemiology and Global Health*, 23, Article 101348.
- Staples, J. (2020). *Sacred cows and chicken Manchurian - The everyday politics of eating meat in India*. Seattle: University of Washington Press.
- Teo, S. (2025). Artificial intelligence and its ‘slow violence’ to human rights. *AI and Ethics*, 5, 2265–2280. <https://doi.org/10.1007/s43681-024-00547-x>
- Trombini, M. E., & Motta, R. (2025). Poof politics and activist networks in the city: Reaching places food politicise don’t. *Cities*, 166, Article e106131. <https://doi.org/10.1016/j.cities.2025.106131>
- Truelove, Y., & Ruszczuk, H. (2022). Bodies as urban infrastructure: Gender, intimate infrastructures and slow infrastructural violence. *Political Geography*, 92, Article 102492. <https://doi.org/10.1016/j.polgeo.2021.102492>
- Vaidyanathan, S., Kuppli, P. P., & Menon, V. (2019). Eating disorders: An overview of Indian research. *Indian Journal of Psychological Medicine*, 41(4), 311–317.
- Valentine, G. (1999). A corporeal geography of consumption. *Environment and Planning D: Society and Space*, 17, 329–351.
- Warde, A. (2016). *The practice of eating*. Cambridge: Polity Press.
- Welch, D. (2017). Consumption and teleoaffective formations: Consumer culture and commercial communications. *Journal of Consumer Culture*, 20(1), 61–82.
- Welch, D., Mandich, G., & Keller, M. (2020). Futures in practice: Regimes of engagement and teleoaffectivity. *Cultural Sociology*, 14(4), 438–457.