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BUILDING HEALTHY CITIES



CITIZEN SPOTLIGHT: FOOD SAFETY IN INDORE

The USAID-funded Building Healthy Cities (BHC) project is a 5-year (2017-2022) learning project that aims to refocus city policies, planning, and services with a health equity lens while improving data-driven decision making for Smart Cities in four countries: Indore in India, Makassar in Indonesia, Da Nang in Vietnam, and Kathmandu in Nepal.

Planning for a Smart City is intrinsically linked to health: transportation, environment, sanitation, education, recreation, technology, and the built environment all influence the health of an urban population. Partnering closely with Indore Smart City Development Limited (ISCDL), BHC has engaged with sectors that contribute, directly or indirectly, to citizens' health and quality of life. This multisector engagement aims to provide all municipal sectors a common understanding of how they contribute to health. In Indore, these sectors include health, urban planning and development, information and communications, education, waste management, pollution, food safety and hygiene, women and child development, traffic, and road safety.

Equitable access to healthy food is an important part of healthy urban planning. In Indore, a large portion of the population consumes food from street food markets. Recently, the Indore Municipal Corporation (IMC) and ISCDL have focused on ensuring the cleanliness of these marketplaces. In the wake of COVID-19 and shifting practices regarding food hygiene and choices, it is even more important that interventions take a multisector approach to safety and hygiene during the preparation, serving, and consumption of street food. BHC is committed to helping IMC and ISCDL in their efforts to strengthen healthy and safe food systems for all citizens.

Food safety is responsible for a considerable public health burden around the world in the form of foodborne illnesses. According to the World Health Organization, an estimated 600 million people fall sick after consuming contaminated food and 420,000 die every year.¹ Food safety is also an important way to prevent of diarrheal diseases in children under five, which afflict about 10% of

¹ World Health Organization. 2022. "Food Safety." May 19, 2022. <https://www.who.int/news-room/fact-sheets/detail/food-safety>.

Indian children.² India bears an economic burden of US\$15 billion annually due to unsafe food.³ Recently, the Food Safety and Standards Authority of India (FSSAI) has taken steps to ensure the quality of food in India, including stringent packaging and labelling norms, regulation of restaurants and street food vendors, and inspections and sampling of food products. These measures have had a positive impact in Indore; the food streets of 56 Dukan and Sarraffa have won the FSSAI's "Clean Street Food Hub" tag in 2021.⁴ However, many other food streets in Indore have yet to meet the same food safety standards.

Citizen feedback is valuable when it comes to planning, especially in urban areas. BHC conducted a rapid feedback survey in Indore in November 2021—January 2022 to understand citizens' knowledge and attitudes around food safety and hygiene in street food markets, and changes in consumption practices since the beginning of COVID-19 restrictions. The survey was conducted both online and offline to ensure a more diverse population, and targeted regular consumers of street food from various Indore markets. This brief summarizes the survey findings.

The survey results were also incorporated into BHC's Healthy Indore Action Plan, which recommends seven interconnected "coherent actions" the city can take to address key determinants of urban health, including strengthening healthy food systems for all citizens. The Action Plan was presented to the Indore City government in March 2022.

Methods

The food survey questionnaire was designed to collect information regarding citizen knowledge of and attitudes toward food safety and hygiene in street food markets, as well as changes in consumption practices since the beginning of COVID-19 restrictions. The final questionnaire included 24 questions. Data were collected online through Google Forms, as well as offline and in-person by BHC staff in order to include populations without access to smartphones or computers. The BHC team shared the online survey widely through professional networks with city stakeholders, partner academic institutions, and participants in previous BHC events. BHC staff who collected in-person data interviewed daily wage laborers, auto rickshaw drivers, and domestic workers who had consumed street food from multiple locations in the city including 56 Dukan, Vijay Nagar, Musakhedi, Amartekri, Arjunpura, Chandan Nagar, and Lalbagh. A total of 229 adults (age 18 and older) responded to the survey, including 74 residents living in informal settlements. All selected respondents had consumed food from these street food markets. Verbal as well as written consent was collected before the beginning of the interview and only those who gave their consent were interviewed.

² Ghosh, Koustav, Atreyee Sinha Chakraborty, and Mithun Mog. 2021. "Prevalence of Diarrhoea among under Five Children in India and Its Contextual Determinants: A Geo-Spatial Analysis." *Clinical Epidemiology and Global Health* 12 (October): 100813.

³ Jaffee, Steven, Spencer Henson, Laurian Unnevehr, Delia Grace, and Emilie Cassou. 2019. "The Safe Food Imperative: Accelerating Progress in Low- and Middle-Income Countries." Agriculture and Food Series. Washington, DC: World Bank Group.

⁴ TNN. 2021. "Indore Eat-Streets Get FSSAI 'Cleanest' Tag." *The Times of India*, September 2, 2021. <https://timesofindia.indiatimes.com/city/indore/indore-eat-streets-get-fssai-cleanest-tag/articleshow/85855279.cms>.



Results

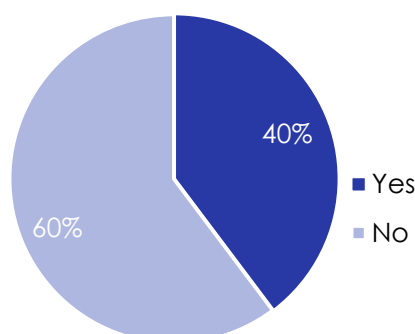
General Information (n=229)

Food street/area covered	Vijay Nagar	30%
	56 Dukaan	50%
	Other settlements	21%
Gender	Male	47%
	Female	52%
	Third gender	1%
Age (years)	18-20 years	40%
	21-30 years	34%
	30+ years	20%
	No response	6%
Education	Primary	8%
	Middle	6%
	Higher/high school	35%
	Graduate/higher	52%
Health status	Sick	0%
	Just fine	8%
	Good	57%
	Excellent	31%
	No response	3%

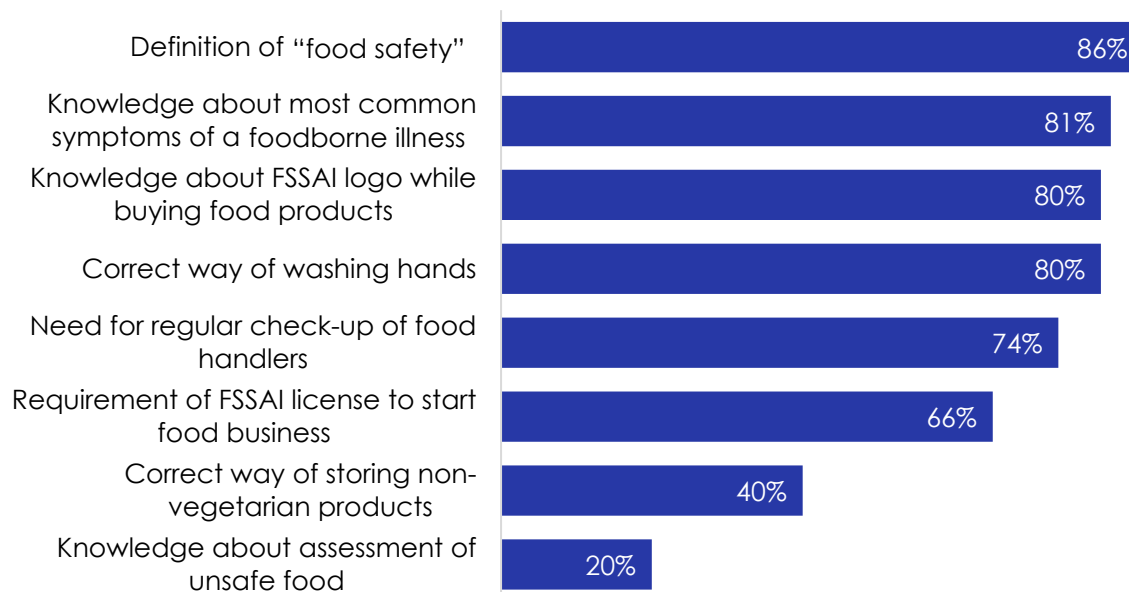
The respondents were fairly equally split between male and female, and most had frequented the food street 56 Dukan (50%). The majority of respondents fell into the younger age groups, between 18–30, which is likely because the online responses included university students. Over half of the sample (52%) had completed bachelor's or master's degree courses, which is more than the average population of Indore. The most common health status was “good” (57%), which also may be due to the younger age of the sample. BHC acknowledges that this convenience sample under-represents older residents and those with a lower level of education, though every attempt was made to include these groups through our in-person sampling.

Consumer Food Safety Knowledge and Experiences

Forty percent of respondents reported that they or somebody in their household had suffered from foodborne illnesses within the last month (n=229).

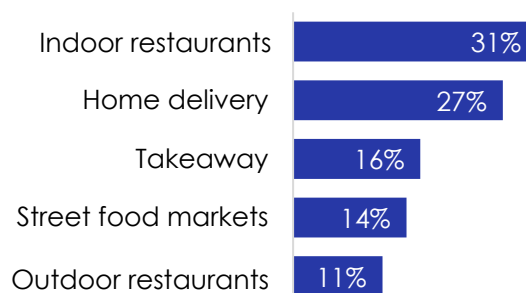


The majority of respondents indicated that they understood the definition of “food safety” (86%, n=202), and knew about the most common symptoms of a foodborne illness (81%). Fewer respondents knew how to safely store non-vegetarian foods (40%) or how to assess unsafe food (20%). The majority of respondents indicated that they knew the correct way to wash hands (80%).



Consumer Attitudes Toward Food Safety

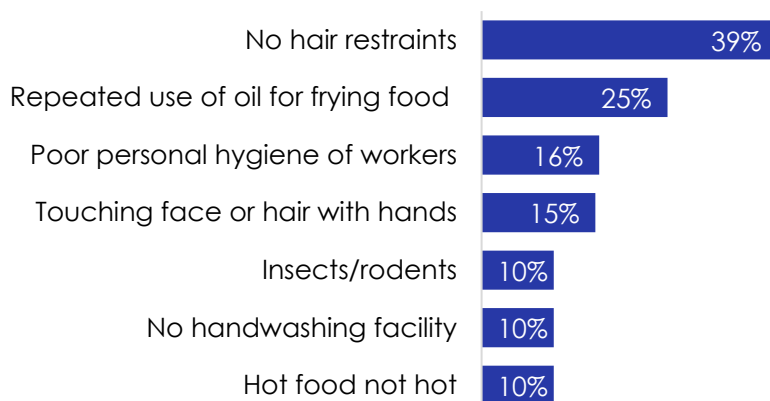
Consumers bought prepared foods from a range of vendors (n=228). Since the beginning of COVID-19 restrictions, the most common place from which respondents purchased prepared food was indoor restaurants (31%), followed by home delivery (27%), and takeaway (16%). Only 14% of respondents usually consumed food from street food markets.



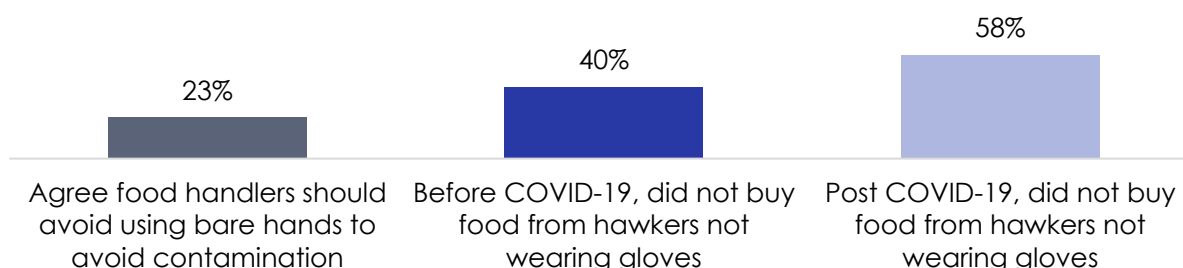
Respondents rated quality of food (35%) and taste of food (28%) as the most important factors that influenced where to eat (n=229). Only 20% mentioned that safety and hygiene were a key consideration when choosing where to eat. This is a surprising finding, because **89% had also observed food safety issues in the street food market where they were interviewed (n=227).**



When asked what food safety problems they had noticed, **respondents reported seeing food handlers not using hair restraints (39%, n=199)**. Respondents also noticed repeated use of oil for frying (25%) and handling food with bare hands (23%).

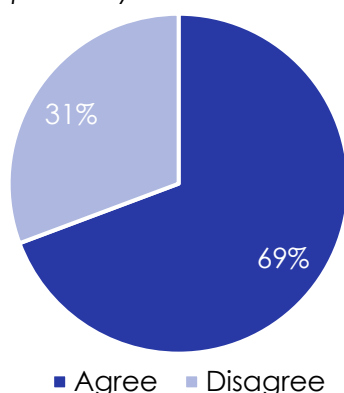


Nearly one quarter (23%) of respondents agreed that food handlers should cover their hands when preparing food. COVID-19 had some influence on buying behaviors regarding this issue, with **45% more respondents (an increase of 18 percentage points) saying they would not buy from food hawkers who did not wear gloves as compared to pre-COVID-19 (n=229)**.

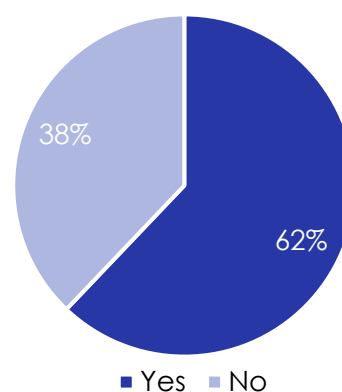


Despite the issues noted, **69% of respondents thought that the food service establishments were doing enough to provide them with safe food**. However, 62% also agreed that they would prefer eating out more often if food safety was not a concern (n=228).

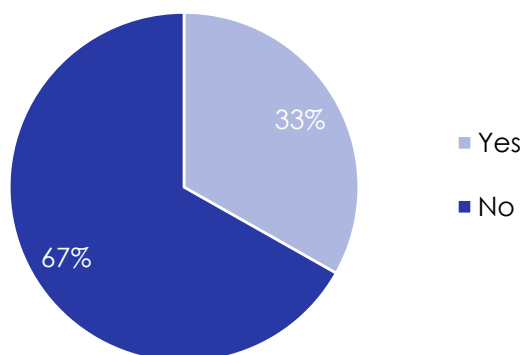
Do you think food service establishments are doing enough to provide you with safe food?



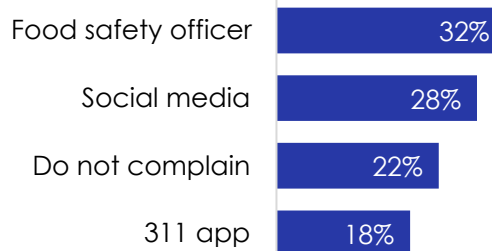
If food safety were not a concern, would you eat out more often?



Two-thirds (67%) of respondents said they did not know where to submit complaints about issues regarding food safety (n=229).

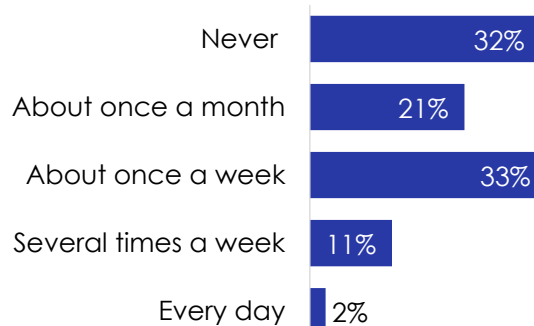


Among those who did know where to submit complaints (n=76), **the most common avenues were to a food safety officer (32%) or via social media (28%).** Although there is a citizen reporting system mechanism (311 app) in place, it was the least used method for filing complaints about food safety (18%).

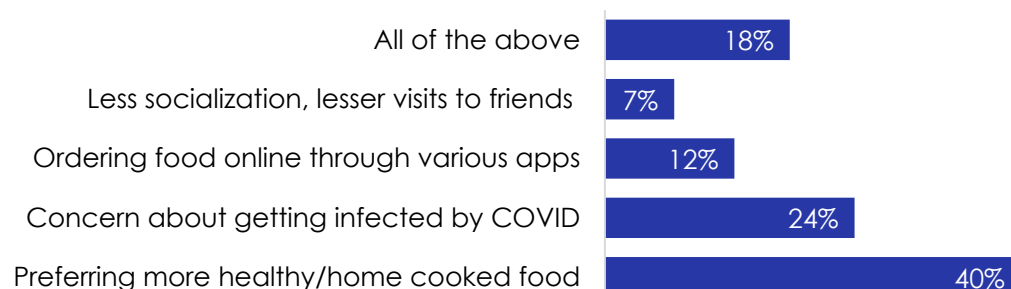


Changes in Food Safety Practices Post-COVID-19

When asked how often respondents "ate out" or ate meals prepared outside of their home prior to COVID-19 restrictions, the responses varied greatly (n=228). The vast majority (89%) of respondents said that the frequency of their visits to the street food market had changed post COVID-19. **About one-third (33%) currently eat out about once per week, and another third (32%) said they never eat out.**



The most common reason stated for visiting street food markets less frequently post COVID-19 was a **preference for healthier/home cooked food (40%, n=205).**



When asked if they were more concerned about food safety since COVID-19 became an issue, the majority of respondents (87%) agreed that they are. This concern is reflected in the street food consumption practices of the respondents. When asked if they wash their hands before touching their food, the majority of respondents said yes (80%, n=227).



Discussion

Respondents to this mini-survey demonstrated an adequate baseline understanding of knowledge regarding food safety, food-related illnesses, and unsafe food behaviors, and noted their concern about ensuring food safety post-COVID-19. However, 40% of respondents still reported that they or somebody in their family suffered from food-related illnesses in the last month. The results suggest that the following actions could improve food safety knowledge and behavior: improving the ability to assess contaminated food; making safety and hygiene a higher priority when choosing where to eat; working with street food market vendors to address unhygienic practices; and improving knowledge of, and opportunities for, complaint reporting when food poisoning or hygiene issues occur. The fact that 80% of consumers already knew to look for the FSSAI logo when shopping is encouraging; FSSAI may want to further expand this program to steer people toward safer food shops at all income levels.

Indore has active citizen reporting systems in place in the form of the 311 app and CM Helpline that have been widely promoted to register complaints. Still, very few citizens use it to report food safety-related issues. This finding is reiterated in the BHC citizen reporting system assessment, which also suggested that most complaints through the 311 app related to electricity, water supply, sewage, and drainage.⁵ If existing apps are not the best avenue for filing food safety complaints, then other options should be explored. For example, in another BHC city (Da Nang, Vietnam), the project developed a restaurant rating app that also allowed users to easily report food safety incidents and find resources on food safety best practices.⁶ Swiggy, a food delivery app in India, has supported street food vendors by starting a program in 125 Indian cities (including Indore) under the Prime Minister's Street Vendor Atma Nirbhar Nidhi Scheme (PM SVaNidhi scheme). Under this scheme, Swiggy is training street food vendors on FSSAI regulations and helping businesses get online.⁷

⁵ Faizal, Memon, Neeraj Mishra, and Damodar Bachani. 2020. "Assessment Report on Citizen Reporting Systems in Indore City." Arlington, VA: Building Healthy Cities (BHC) project. <https://www.jsi.com/resource/building-healthy-cities-assessment-report-on-citizen-reporting-systems-in-indore-city/>.

⁶ Traceverified. 2021. *Tracefood*. East Meets West Foundation. <https://traceverified.com/>.

⁷ The Economic Times. 2020. "Swiggy Street Food Vendors: Swiggy Expands Street Food Vendors Programme to 125 Cities - The Economic Times." *Indiatimes*, December 10, 2020. <https://economictimes.indiatimes.com/tech/technology/swiggy-expands-street-food-vendors-programme-to-125-cities/articleshow/79658527.cms?from=mdr>.



Making these suggested changes could have a positive impact not just on food safety, but also on the local food economy. The COVID-19 pandemic has highlighted the importance of food safety, security, and health. The results of this study also suggest that if there were fewer perceived food safety concerns, more people would eat out. As COVID-19 has significantly affected the street food business in Indore, this could make a real difference in food providers' incomes.⁸

The results also suggest that COVID-19 has changed consumer practices as respondents have become more concerned about handwashing practices and are avoiding consuming food from hawkers who do not wear gloves. Amid its numerous challenges, COVID-19 has offered an opportunity to improve the food safety systems in Indore. As citizens have become more concerned about their health, it is the right time for the city administration to spread awareness about food safety and hygiene-related concerns, enforce stricter regulations, and engage the community to change hygiene and purchasing behaviors that help to support these regulations. Assuring adherence to food safety standards and protocols during food preparation and sale and educating food handlers and consumers about food safety will go a long way in ensuring safe food for a healthy tomorrow.

⁸Free Press journal. 2021. "Indore: Pandemic Hits Food Culture, 'Do-Gaj-Doori' Becomes a Nightmare for Local Street Vendors." *Free Press Journal*, September 4, 2021.
<https://www.freepressjournal.in/indore/indore-pandemic-hits-food-culture-do-gaj-doori-becomes-a-nightmare-for-local-street-vendors>.

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