

Additional Table 2. Study Characteristics

Author (year)	Country	Study design	Study period	Objective(s)	Name of data source NA=primary source	Age range/mean age (SD)	Sample size
Alfonzo et al. (2014)	China	Cross-sectional study	2013	1) To examine the connections between the design of the built environment and walking. 2) To examine the connections between the design of the built environment and obesity. 3) To examine the connections between walking and obesity and income in urban settings in China.	NA	33.6	1,070
Ghosh-Dastidar et al. (2014)	USA	Cross-sectional study	2011- 2013	1) To examine the relationship among distance to store, food prices, and obesity.	The Pittsburgh Hill/Homewood Research on Eating, Shopping, and Health study	18-75	1214
Glazier et al. (2014)	Canada	Cross-sectional study	2003-2009	1) To examine the individual and combined associations of residential density and the presence of walkable destinations with transportation behaviors, overweight, obesity, and diabetes.	1) Statistics Canada (2006) 2) DMTI Spatial Inc. Enhanced Points of Interest (2009) 3) the City of Toronto (2009) 4) the Ministry of Education (2009) 5) the 2006 Transportation Tomorrow Survey (TTS) 6) the Canadian Community Health Survey (CCHS) from 2003 to 2008 7) the Ontario Diabetes Database (ODD, 2009)	30-64	1,311,485
Hollands et al. (2014)	Canada	Cross-sectional study	2007-2008	1) To determine whether the availability of fast-food	Canadian Community Health Survey (CCHS)	18-65	89,733

Author (year)	Country	Study design	Study period	Objective(s)	Name of data source NA=primary source	Age range/mean age (SD)	Sample size
Pearson et al. (2014)	New Zealand	Cross-sectional study	2006-2007	restaurants has an influence on body mass index (BMI). 1) To understand the potential influence of neighbourhood environments on both unhealthy weight outcomes (overweight and obese) and weight-related behaviours (walking, physical activity levels and fruit and vegetable consumption).	the 2006/7 New Zealand Health Survey (NZHS)	≥ 15	12,488
Pouliou et al. (2014)	Canada	Cross-sectional study	2001, 2003	1) To identify heterogeneities associated with the relationships between body mass index (BMI) and individual as well as socio-environmental correlates at the individual- and area-levels.	The 2003 Canadian Community Health Survey and the 2001 Canadian Census	≥20	12,836
Stark et al. (2015)	USA	Cross-sectional study	2002-2006	1) To evaluate the association between adult individuals' body mass index (BMI) and characteristics of parks (size and cleanliness) in an urban environment taking into account the physical and social environment of the neighborhood.	Community Health Survey in New York City	≥ 18	44,282
De Bourdeaudhuij et al. (2015)	12 countries (Australia, Belgium, Brazil, Colombia, Czech Republic, Denmark, China, Mexico, New	Cross-sectional study	2002–2011	1) To examine associations between perceived neighbourhood built environmental attributes and BMI/weight status in a multi-country study including 12 environmentally and culturally diverse countries.	IPEN Adult Study (International Physical Activity and Environment Network Adult Study) (2002-2011)	18–66	14,222

Author (year)	Country	Study design	Study period	Objective(s)	Name of data source NA=primary source	Age range/mean age (SD)	Sample size
	Zealand, Spain, UK, USA)						
Dubowitz et al. (2015)	USA	Cross-sectional study	2011	1) To illuminate where, when and how residents of food deserts interact with the food environment (purchasing practices), describe the food environment in these neighbourhoods and where residents shop (food availability). 2) To test how indicators of food purchasing practices and food availability are associated with diet and weight.	Pittsburgh Hill/Homewood Research on Eating, Shopping and Health (PHRESH)	≥18	1,372 households
Huang et al. (2015)	USA	Cross-sectional study	2008–2009	1) To locate obesity clusters and to analyse them in relation to the neighborhood-built environment.	The Seattle Obesity Study (2008-2009)	≥18	1,602
Laxy et al. (2015)	USA	Cross-sectional study	2008-2010	1) To investigate the association between neighborhood-level economic hardship, the retail food environment, fast food consumption, and obesity prevalence.	The Survey of the Health of Wisconsin (SHOW)	21–74	1,570
Matozinhos et al. (2015)	Brazil	Cross-sectional study	2008-2010	1) To identify environmental variables associated with obesity in the adult population of a city in Brazil.	The Surveillance System for Risk and Protective Factors for Chronic Diseases by Telephone Survey from 2008 to 2010	18-93	5,273
Mejia et al. (2015)	USA	Cross-sectional study	2011	1) To examine whether an association exists between the number and type of food outlets in a neighborhood and dietary intake and body mass	the 2011 Los Angeles County Health Survey (LACHS is a health survey conducted periodically by the Los	≥ 18	5,185

Author (year)	Country	Study design	Study period	Objective(s)	Name of data source NA=primary source	Age range/mean age (SD)	Sample size
				index (BMI) among adults in Los Angeles County.	Angeles County Department of Public Health)		
Meyer et al. (2015)	USA	Cohort Study	1992-2006	1) To characterized neighborhoods with respect to their composition of features, and quantified associations with diet, physical activity (PA), body mass index (BMI), and insulin resistance (IR)	The Coronary Artery Risk Development in Young Adults Study (CARDIA) is a multicenter, longitudinal study of cardiometabolic risk starting in young adulthood	18–30	4,143
Oliver et al. (2015)	New Zealand	Cross-sectional study	2008-2010	1) To determine the associations between body size and built environment walkability variables, as well as the mediating role of physical activity and sedentary behaviors with body size.	The URBAN Study, which is the New Zealand arm of the multi-country International Physical Activity and Environment Network (IPEN)	20–65	2,033
Richardson et al. (2015)	USA	Cohort Study	1985-2006	1) To examine longitudinal pathways from multiple types of neighborhood restaurants and food stores to BMI, through dietary behaviors.	The Coronary Artery Risk Development in Young Adults (CARDIA) study	18–30	5,114
Xu et al. (2015)	USA	Cross-sectional study	2012	1) To examine the association of neighborhood-built environments with individual physical inactivity and obesity in the U.S.	Behavioral Risk Factor Surveillance System (BRFSS)	> 18	328,156
Yan et al. (2015)	USA	Cross-sectional study	2009	1) To study the association of density of food retailer type with obesity rate in U.S. adults in local regions controlling for socioeconomic factors to identify nationally representative insights on food environmental effects.	1) U.S. Department of Agriculture (USDA) 2) American Community Survey (ACS) 3) Centers for Disease Control and Prevention (CDC), and U.S. Census Bureau	25–64	3,041

Author (year)	Country	Study design	Study period	Objective(s)	Name of data source NA=primary source	Age range/mean age (SD)	Sample size
Creatore et al. (2016)	Canada	Cross-sectional study	2001-2012 (every two years)	1) To examine whether walkable urban neighborhoods are associated with a slower increase in overweight, obesity, and diabetes than less walkable ones.	4) County Business Patterns (CBP) Provincial health care data and Canadian Community Health Survey	30-64	8,777
Ellaway et al. (2016)	Scotland	Cross-sectional study	2003	1) To link individual health and behavioural data with area-level data on accessibility to examine whether access to recreational physical activity facilities by different modes of transport was associated with the body mass index of adults in Scotland, and the extent to which any association was mediated by physical activity participation.	1) 2003 Scottish Health Survey 2) 2001 Census	≥ 16	6,365
King et al. (2016)	Australia	Cross-sectional study	2003–2004	1) To test whether the intensity of destinations near participants' homes is related to reduced BMIs and assess whether this relationship is mediated by residents' overall physical activity levels.	Victorian Lifestyle and Neighbourhood Environment Study (VicLANES)	18-75	2,349
Polsky et al. (2016)	Canada	Cross-sectional study	2005, 2007/2008 and 2008/2010	1) To examine the independent and joint associations of absolute and relative densities of restaurants near home with weight status in a large, urban, population-based sample of adults.	three combined cycles of the Canadian Community Health Survey (CCHS 2005, 2007/2008 and 2008/2010)	≥ 18	10,199

Author (year)	Country	Study design	Study period	Objective(s)	Name of data source NA=primary source	Age range/mean age (SD)	Sample size
Sugiyama et al. (2016)	Australia	Cohort Study	2000-2003 and 2005-2006	1) To examine 4-year change in adults' waist circumference in relation to proximity to city centre, proximity to closest suburban centre, and local-area walkability.	Place and Metabolic Syndrome (PAMS) project (the early 2000s)	≤85	2,080
Wasfi et al. (2016)	Canada	Cohort Study	2016	1) To assess the impact of neighborhood walkability on body mass index (BMI) trajectories of urban Canadians.	Canada's National Population Health Survey (NPHS)	18–55	2,935
Congdon (2017)	USA	Cross-sectional study	2013	1) To provide a comprehensive approach to geographic dimensions of obesity variation in the US, using recent data and a national perspective, and in the comprehensive range of environmental factors used to account for such variation.	1) Behavioural Risk Factor Surveillance System (BRFSS) 2) Food Environmental Index	≥20	50 states
Cooksey-Stowers et al. (2017)	USA	Cross-sectional study	2009	1) To make a novel contribution by examining the country wide existence of “foodswamps” in the U.S. 2) To contribute to the literature on food swamps in the U.S. by considering the relative balance among multiple food outlets in the environment rather than absolute metrics of grocery store or restaurant access. 3) To address the question of reverse causality, which is relevant because both individuals and the builders of food outlets choose to go into certain neighborhoods.	1) United States Department of Agriculture (USDA) Food Environment Atlas (U.S. CensusBureauCounty BusinessPatterns/Centers for Disease Control and Prevention (CDC) Behavioral Risk Factor Surveillance Systems (BRFSS)) 2) Federal Information Processing System (FIPS) codes 3) American Community Survey	≥20	3,141 counties

Author (year)	Country	Study design	Study period	Objective(s)	Name of data source NA=primary source	Age range/mean age (SD)	Sample size
Kim et al. (2017)	South Korea	Cross-sectional study	2011-2013	1) To examined whether both individual and environmental factors were associated with body mass index in Seoul.	Community Health Surveys	≥ 19	45,447
Lee et al. (2017)	USA	Cohort Study	wave I: 1998–2001 and 2005–2008 wave II: 2002– 2005 and 2008–2011)	1) To examine the associations between characteristics of built environment with adiposity and diabetes using the Framingham Heart Study, a community-based prospective study. 2) To explore the cross-sectional and longitudinal association between intersection density, greenspace, recreation land and food store elements in the built environment, with adiposity measures and diabetes.	1) Framingham Heart Study Offspring 2) Generation Three cohorts of the Framingham Heart Study who resided in Massachusetts at the time of the clinic visits.	48.6 (13.0)	4,010
Mazidi et al. (2017)	USA	Cross-sectional study	2012	1) To evaluate the population-level association between both full-service restaurants (FSRs) and fast-food restaurants (FFRs) and the prevalence of obesity and calculated the proportion of calories consumed in these establishments.	the Behavioral Risk Factor Surveillance System (BRFSS) (2012)	≥20	> 400,000
Patel et al. (2017)	India	Cross-sectional study	2010-2011	1) To assess the association of full service and fast-food restaurant density with dietary intake and overweight/obesity in Delhi, India.	the Centre for Cardiometabolic Risk Reduction in South-Asia (CARRS) study	≥ 20	5,264
Yenerall et al. (2017)	USA	Cross-sectional study	2012	1) To investigate the sensitivity of food access models to a dataset's spatial distribution and the empirical	The Dan River Partnership for a Healthy Community (DRPHC)	55.95 (17.18)	784

Author (year)	Country	Study design	Study period	Objective(s)	Name of data source NA=primary source	Age range/mean age (SD)	Sample size
				definition of food access, which contributes to understanding the mixed findings of previous studies.			
Rummo et al. (2017)	USA	Cohort Study	1985-2011	1) To quantify associations between different types of neighborhood food outlets and BMI over time, while accounting for correlation between measured exposures and unmeasured characteristics.	Coronary Artery Risk Development in Young Adults (CARDIA) study	18-30	12,174
Zenk et al. (2017)	USA	Cohort Study	2002, 2008	1) To examine whether multiple measures of neighborhood food availability were associated with body mass index (BMI) over time in a predominately black and Hispanic adult sample living in low to moderate income urban neighborhoods.	Community survey conducted by the Healthy Environments Partnership	> 25	219
Hobbs et al. (2018)	UK	Cross-sectional study	2010-2013	1) To explore how aspects of the food and physical activity environment cluster and second, investigates the association between neighbourhood typologies, BMI, and obesity.	the Yorkshire Health Study (YHS)	18-86	22,889
Klomp maker et al. (2017)	Netherlands	Cross-sectional study	2012	1) To evaluate whether the association of green space with being overweight and physical activity depended upon definition of greenspace.	Public Health Monitor (2012) (Gezondheidsmonitor Volwassenen GGD-en, CBS en RIVM)	≥19	387,195
Koohsari et al. (2018) (a)	Japan	Cross-sectional study	2011	1) To examine associations between multiple physical activity environment measures and Walk Score® ratings with Japanese adults' body mass index (BMI).	the Healthy Built Environment in Japan (HEBEJ)	40-69	1,073

Author (year)	Country	Study design	Study period	Objective(s)	Name of data source NA=primary source	Age range/mean age (SD)	Sample size
Koohsari et al. (2018) (b)	Australia	Cohort Study	2003- 2004	1) To examine the longitudinal relationships of two walkability indices – conventional walkability and space syntax walkability, and their individual components, with weight change over four years among adults in Adelaide, Australia.	The PLACE (Physical Activity in Localities and Community Environments) (to examine associations of neighbourhood environmental attributes with physical activity, in 2003–2004)	20 - 66	910
Li et al. (2018)	USA	Cross-sectional study	2009-2014	1) To investigate the influence of street greenery and walkability on body mass index in Cleveland, Ohio, USA for different age–gender groups.	1. Ohio Bureau of Motor Vehicles (BMV) (driver's license and state identification card applications with other useful variables such as age, gender, and residential location of residents) 2. American Census Survey 5-year estimates (2009–2014) at the census tract level.	18–84	305,295
Maharana et al. (2018)	USA	Cross-sectional study	2017	1) To propose an approach for consistent measurement of the features of the built environment (i.e., both natural and modified elements of the physical environment) and its association with obesity prevalence to allow for comparison across studies.	the Centers for Disease Control and Prevention's 500 Cities project (Data on adult obesity prevalence)	≥ 18	5,132,741
McCormack et al. (2018)	Canada	Cross-sectional study	2014	1) To estimate the associations between walkability, measured using Walk Score®, and each of waist circumference (WC), waist to hip ratio (W-H ratio),	NA	≥20	851

Author (year)	Country	Study design	Study period	Objective(s)	Name of data source NA=primary source	Age range/mean age (SD)	Sample size
				and BMI among urban Canadian adults.			
Mohamed et al. (2018)	USA	Cross-sectional study	2016-2017	1) To examine neighbourhood predictors of obesity using primary data collected from participants in Detroit, Michigan.	NA	53.31	367
Murphy et al. (2018)	Australia	Cross-sectional study	2012-2013	1) To investigate associations between measures of supermarket and fast-food chain access and BMI across established and urban-growth areas. 2) To understand the contextual factors that influence food environments in established and urban-growth areas. 3) To identify challenges to the development of healthy equitable local food environments.	preventive health survey (PHS) collected by the Victorian Department of Health and Human Services	54.15 (0.31)	3,141
Zhao et al. (2018)	China	Cross-sectional study	2016	1) To investigate the Uncertain Geographic Context Problem (UGCoP) by exploring the relationships between the built environment and obesity based on individuals' activity space.	Survey questionnaires collected from households in Guangzhou	≥18	1,029
Cochrane et al. (2019)	12 countries (Australia, Belgium, Brazil, Colombia, Czech Republic, Denmark, China,	Cross-sectional study	2002-2011	1) To examine associations between the same adiposity measures (BMI and overweight/obesity status) and perceived proximity to various types of food outlets.	International Physical Activity and the Environment Network (IPEN) Adult study	16–66	10,008

Author (year)	Country	Study design	Study period	Objective(s)	Name of data source NA=primary source	Age range/mean age (SD)	Sample size
	Mexico, New Zealand, Spain, UK, USA)						
de Freitas et al. (2019)	Brazil	Cross-sectional study	2013	1) To evaluate the association between aspects of the consumer food environment in food stores that sell FVs and overweight among users of a Brazilian primary health care system.	NA	>20	2,810
Hobbs et al. (2019) (a)	UK	Cohort Study	wave I: 2010–2012 wave II: 2013–2015	1) To extend the evidence by developing a typology of neighbourhood food environments by considering the clustering of food outlets by population density at baseline.	the Yorkshire Health Study (YHS)	16–85	8,864
Hobbs et al. (2019) (b)	UK	Cohort Study	wave I: 2010–2012 wave II: 2013–2015	1) To examine if change in BMI and obesity was associated with the availability of physical activity (PA) facilities and parks and explored if these associations differed by age.	the Yorkshire Health Study (YHS) (formerly the South Yorkshire Cohort Study)	18–86	8,864
Hobbs et al. (2019) (c)	UK	Cross-sectional study	2010-2012	1) To investigate associations between residential fast-food outlet availability and obesity, explore the impact of methodological diversity on associations seen, and explore if this relationship varies by age.	the Yorkshire Health Study	≥ 18	22,889
Mackenbach et al. (2019) (a)	5 countries (Belgium, France, Hungary,	Cross-sectional study	February and September 2014	1) To examine explanatory pathways for the association between spatial access to fast food outlets and body weight	the European Spotlight project (2014)	≥18	5,076

Author (year)	Country	Study design	Study period	Objective(s)	Name of data source NA=primary source	Age range/mean age (SD)	Sample size
	Netherlands, UK)			in 5,076 European adults (18+).			
Mackenbach et al. (2019) (b)	Netherlands	Cross-sectional study	2014	1) To investigate the moderating role of self-control and financial strain in the relation between the food environment and higher body weight.	the longitudinal Dutch population-based the Gezondheid en Levens Omstandigheden Bevolking Eindhoven en omstreken (GLOBE) study (to quantitatively assess mechanisms and factors explaining socio-economic inequalities in health in the Netherlands by postal survey, in 2014)	25–75	2,812
Sallis et al. (2020)	12 countries (Australia, Belgium, Brazil, Colombia, Czech Republic, Denmark, China, Mexico, New Zealand, Spain, UK, USA)	Cross-sectional study	2002-2011	1) To provide international evidence on associations of built environments with physical activity and weight status in adults	International Physical Activity and Environment Network (IPEN) Adult Study.	18-66	> 14,000
Thielman et al. (2019)	Canada	Cross-sectional study	2007-2011	1) To examine relationships between walkability and objectively measured BMI in various age groups, in a nationally representative population.	Canadian Health Measures Survey 2007-2011	6-79	9,265
Wang et al. (2019)	China	Cross-sectional study	2017	1) To explore the relationship between residential density	The Built Environment and Chronic Health	35–74	1,551

Author (year)	Country	Study design	Study period	Objective(s)	Name of data source NA=primary source	Age range/mean age (SD)	Sample size
Wilkins et al. (2019)	UK	Cross-sectional study	2010-2015	and excess body weight among adults in China. 1) To replicate common methods for measuring the Retail Food Environment around the home, as identified in the Methods Review. 2) To compare associations between the RFE and weight status when employing: different definitions of outlet construct and differing Retail Food Environment metrics.	Conditions: Adults (BEACH-Adults) Yorkshire Health Study (YHS)	18-86	10,111
Carroll et al. (2020)	Australia	Cohort Study	2000-2010	1) To simultaneously assess associations between area SES, walkable urban form (dwelling density, intersection density, and land use mix), public open space (POS; count, area and greenness), food resources (fast food outlet count, and a relative food environment index) and 10-year change in body mass index (BMI) and waist circumference (WC).	Northwest Adelaide Health Study (NWAHS)	51 (16.9)	2,253
Cunningham-Myrie et al. (2020)	Jamaica	Cross-sectional study	2007-2008	1) To derive estimates of the associations between measures of the retail food environments and mean BMI.	1) 2011 census from the Statistical Institute of Jamaica 2) Mona Geo Informatics Institute's (MonaGIS) proprietary JAMNAV database	15–74	2,529
Nichani et al. (2020)	Canada	Cohort Study	2000 -2008	1) To estimate the associations between neighbourhood characteristics and self-reported body mass index (BMI), waist circumference (WC), and	Alberta's Tomorrow Project (ATP)	55.2 (9.1)	14,550

Author (year)	Country	Study design	Study period	Objective(s)	Name of data source NA=primary source	Age range/mean age (SD)	Sample size
				waist-to-hip ratio (WHR) risk categories among Canadian men and women.			
Okuyama et al. (2020)	Sweden	Cohort Study	2005-2015	1) To examine the longitudinal association between availability of fast-food outlets and physical activity facilities and the risk of obesity among adults.	Multiple national register data from Sweden	20–55	1,710,055
Sun et al. (2020)	USA	Cross-sectional study	2003	1) To examine the extent to which socio-economic, behavioural, and built environment characteristics contribute to spatial disparities in adult obesity.	NYC Community Health Profiles and Atlas	≥18	59 local areas
Tarlov et al. (2020)	USA	Cohort Study	2007-2014	1) To evaluate longitudinal relationships between neighborhood walkability and body weight among adults living in large urban areas.	Veterans Affairs clinical and administrative data (2007-2014)	20-80	828,753
Van Dyck (2020)	10 countries (Australia, Belgium, Brazil, Colombia, Czech Republic, Denmark, China, Mexico, Spain, USA)	Cross-sectional study	2002-2011	1) To examine whether accelerometer-based physical activity and sedentary time mediate the associations of neighbourhood physical environmental perceptions with body mass index (BMI) and weight status across 10 high- and middle-income countries.	International Physical Activity and the Environment Network (IPEN) Adult study.	18–66	5,712
Walker et al. (2020)	Canada	Cross-sectional study	2006-2009	1) To identify the association between the food environment and obesity.	NA	35-70	8,076
Carroll et al. (2021)	Australia	Cross-sectional study	2017 -2018	1) To improve understandings of the relationship between the community food	Australian National Health Survey (NHS) 2017-2018	49.2 (18.1)	9,649

Author (year)	Country	Study design	Study period	Objective(s)	Name of data source NA=primary source	Age range/mean age (SD)	Sample size
				environment and obesity in the Australian context by evaluating these associations nationally and for each capital city.			
Cunningham-Myrie et al. (2021)	Jamaica	Cross-sectional study	2008	1) To examine the individual and combined associations of residential density and the presence of walkable destinations with transportation behaviors, overweight, obesity, and diabetes.	1) Statistics Canada (2006), 2) DMTI Spatial Inc. Enhanced Points of Interest (2009) 3) the City of Toronto (2009), 4) the Ministry of Education (2009) 5) the 2006 Transportation Tomorrow Survey (TTS) 6) the Canadian Community Health Survey (CCHS) from 2003 to 2008 7) the Ontario Diabetes Database (ODD, 2009).	15-74	2,529
Nichani et al. (2021)	Canada	Cross-sectional study	2007-2008	1) To investigate associations between objectively derived neighbourhood characteristics, including novel space syntax metrics, and self-reported body mass index (BMI) among Canadian men and women	Secondary data from a previous study https://jech.bmj.com/content/64/11/1010.short	≥ 18	1,718
Paulitsch et al. (2021)	Brazil	Cross-sectional study	2016	1) To investigate the association of food environment variables with Body Mass Index (BMI), excess weight and obesity.	Riograndina Population Health Survey	≥ 18	1,139
Pineda et al. (2021)	Mexico	Cross-sectional study	2012	1) To assess the relationship between the retail food	1) Sociodemographic and anthropometric data were obtained	≥ 18	22,219

Author (year)	Country	Study design	Study period	Objective(s)	Name of data source NA=primary source	Age range/mean age (SD)	Sample size
				environment and body mass index (BMI) in Mexico.	from the 2012 Mexican National Survey of Health and Nutrition (ENSANUT) 2) Retail data were obtained from the 2014 economic census from the National Institute of Statistics, Geography and Informatics (INEGI, Spanish acronym)		
Aljabri (2022)	USA	Cross-sectional study	2011-2012	1) To examine geographic variation of obesity and physical inactivity prevalence in SC counties. 2) To examine the spatial clustering of healthcare capacity (health-care facilities and primary care physicians (PCPs)). 3) To model the relationship between rates of obesity, physical inactivity, and contextual risk factors.	1) Census Population Estimates, 2012 2) Bureau of Labor Statistics, 2012 3) US Census Bureau's Small Area Health Insurance Estimates (SAHIE) model 2011, and the American Community Survey (ACS) 4) Behavioral Risk Factor Surveillance System, 2012	≥ 18	3,643,633
Bonnet et al. (2022)	France	Cross-sectional study	2008	1) To analyze how the living environment (e.g., access to food, sports, and health amenities), and its spatial interactions, could affect the obesity rate.	1) Home-scandata from the Kantar Worldpanel company combining with NutriXConso database (health and consumption data) 2) French Census of Permanent Facilities provided by the French National Institute of Statistics and Economic Studies (INSEE), French Census of Sports Amenities,	≥18	7,940 communities

Author (year)	Country	Study design	Study period	Objective(s)	Name of data source NA=primary source	Age range/mean age (SD)	Sample size
					annual census of sports licenses provided by the French ministry (living environment data) 3) National Population Census and French tax authority (Direction G�n�rale des Imp�ts) by INSEE (controlling demographic data)		
Buszkiewicz et al. (2022)	USA	Cross-sectional study	2016-2017	1) To examine associations between neighborhood-built environment variables, residential property values, and longitudinal 1- and 2-year changes in body mass index (BMI).	Seattle Obesity Study (SOS) III (July 2016 to May 2017)	21-61	819
Domingos et al. (2022)	Brazil	Cross-sectional study	2016	1) To evaluate the association between environmental and individual characteristics and overweight among adult participants of the Cohort of Universities of Minas Gerais (CUME project) from a median-sized city.	Cohort of Universities of Minas Gerais (CUME project)	20-65	289
Frank et al. (2021)	Canada	Cross-sectional study	2009 - 2010	1) To examined built environment influences on travel, physical activity, food consumption, and health.	The Neighbourhood Environments in Waterloo: Patterns of Active Transportation and Health (NEWPATH)	42.21	1,160
Howard Wilsher et al. (2022)	UK	Cross-sectional study	2011-2014	1) To investigate whether similar associations exist for adults and build on previous work by considering the causal pathway between food sales and obesity and whether the consumption of healthy foods (fruits and	1) store-level food sales --a national United Kingdom supermarket chain, mid-August 2012 to mid-August 2013 2) Active People Survey (APS) from 2005 to 2016	≥16	111,287

Author (year)	Country	Study design	Study period	Objective(s)	Name of data source NA=primary source	Age range/mean age (SD)	Sample size
				vegetables) mediates any relationship between food sales and obesity.			
van Erpecum et al. (2022)	Netherlands	Cross-sectional study	2006-2013	1) To examine the association between fast-food outlet exposure (in terms of proximity and density) and BMI in the Dutch adult general population, separately for urban and rural areas.	Lifelines Cohort Study.	18–91	147,027
Aretz et al. (2023)	Netherlands	Cross-sectional study	2016	1) To explore spatial patterns of obesity prevalence of adults (aged 19+) in the Netherlands in 2016.	National Institute of Public Health and the Environment (RIVM)	≥ 19	457,153
Cerceo et al. (2023)	USA	Cross-sectional study	2013–2018	1) To analyze the relationship between food environments and public health focusing on New Jersey.	1) Behavioral Risk Factor Surveillance System (BRFSS) survey 2) the NJ Department of Health (NJDOH) 3) the US Census Bureau	≥18	1,945
Hobbs et al. (2023)	New Zealand	Cohort Study	2005-2015	1) To investigate whether changes in access to fast food outlets and supermarkets from 2005 to 2015 is associated with change in measured adiposity outcomes (BMI and WC) within a key period of adulthood from age 30–40 years. 2) To examine if there are differences in associations between change in the food environment and change in adiposity over time for those who remained at the same address from age 30 to 40 compared to those who	Christchurch Health and Development Study (CHDS).	30-40	1,265

Author (year)	Country	Study design	Study period	Objective(s)	Name of data source NA=primary source	Age range/mean age (SD)	Sample size
				changed address from age 30 to 40.			
Mackenbach et al. (2023)	Netherlands	Cross-sectional study	2019	1) To compare different operationalizations of survey-derived activity space exposures to fast food outlets (FFOs) in associations with use of FFO, diet quality and body mass index (BMI).	The cross-sectional Eet & Leef study (to explore how food retail environments influence food choices and health, between September and December 2019)	18–65	1,784
Wang et al. (2023)	USA	Cross-sectional study	2020	1) To assess the impact of neighborhood walkability on body mass index (BMI) trajectories of urban Canadians.	Canada's National Population Health Survey (NPHS)	≥18	31,568