Table 3. Results of study coding of multilevel investigations of area effects on self-rated health, cardiovascular morbidity and risk factors, and mortality among adults.

Self-rated health									
Citation /location	**Health Outcome /Analytic variable**	**Design/year of data collection (individual level)**	**Individual sample size (sex/age range)**	**Individual characteristics adjusted for**	**Area sample size**	**Area-level exposures**	**Crude between area variation**	**Adjusted between area variation**	**Significant adjusted area effects**
Béland (2002)[41] /Canada	Self-rated health (0/1)	Cross-sectional/ 1987	9422 66% Men ≥ 15y	A, S, E, I, ES, OS, MS, Stressful events, Perceived stress, SN, Social support, Locus of control, Sense of coherence	361 Contexts (Clusters of census tracts)	Unemployment rate [d], Gender distribution [d], Age group distribution [d], % Without high school diploma [d], % Immigrants [d], % Two-parent families [d], Average household income [d], Labour force participation rate [d], Occupational status [d].	VC (Se) = 0.049 (0.015)	NS (Adjusted also for area unemployment)	- Greater % of two-parent families, higher average income, and lower % of immigrants were associated with better SRH. - Cross-level interaction: Detrimental effect of deprivation on SRH was greater among those with greater perceived stress.
Blakely (2000)[42] /USA	Self-rated health (0/1)	Cross-sectional/ 1995; 1997	213695 % Men NR ≥ 15y	S, R/E, I Age-specific analyses	50 States	Median household income [d], Income inequality/Gini coefficient [i]. For 5 different time periods	NR	NR	- Greater inequality was associated with poorer SRH in the ≥ 45 y group. - In the ≥ 45 y group, the association between SRH and income inequality was stronger for earlier measures of inequality (1979-1981) than for concurrent measures (1995-1997).
Blakely (2001) [43] /USA	Self-rated health (0/1)	Cross-sectional/ 1995; 1997	279066 48% Men > 25y	A, S, R/E, I	50 States	Voting inequality [d], Voting turnout [d], Median Income [d], Income inequality/Gini coefficient [i].	NR	NR	- Greater voting inequality, lower voter turnout, higher income inequality, and lower median income were associated with poorer SRH. - Cross-level interaction: Effect of income inequality was greater in the ≥ 45 y group. - Living in more equitable states was associated with better SRH among Whites, but only marginally among Blacks.
Blakely (2002) [44]	Self-rated health (0/1)	Cross-sectional/	185479 48% men	A, S, R/E, I	232 Metropolitan	All area units: Income inequality/Gini	NR	NR	- At the MA, county and state levels, lower income and higher income

/USA		1996; 1998	≥ 0y		areas (MAs) 216 Counties 50 States	coefficient [i], Average household income [d]. MAs: Cost of living index [d]. Counties: Population size [d].			inequality were associated with poorer SRH, but in separate models only; adjusting for the cost of living index at the household level strengthened the association between MA average income and SRH, but did not change the inequality association. - Cross-level interaction: Association between state income inequality and poorer SRH was stronger among residents of rural areas.
Browning (2002) [45] /USA	Self-rated health (ord)	Cross-sectional/ 1997; 1999	2218 42% Men ≥ 18y	A, S, I, E, R/E, MS, Foreign born, Insurance coverage, Health behaviours, Health problems, Years of n'hood residency, Interview year	333 Neighbourhood clusters	Concentrated disadvantage [d], Residential stability [d], Immigrant concentration [d], Collective efficacy [d], Prior neighbourhood health [d], Violent victimization [d].	VC = 0.189 ICC =0.054 p<0.01	VC = 0.178 p<0.01	- Higher levels of collective efficacy associated with better SRH. - Cross-level interaction: The protective effect of individual education was greater in areas with higher collective efficacy.
Browning (2003) [46] /USA	Self-rated health (0/1)	Cross-sectional/ 1995; 1997; 1999	3272 41% Men ≥ 18y	A, S, I, E, R/E, MS, Foreign born, Insurance coverage, Years of n'hood residency, PA, Weight problems, Smoking, Interview year	339 Neighbourhood clusters	Affluence[d], Poverty [d], Residential stability [d], Immigrant concentration [d]. Hypothesised pathways - Collective efficacy[d], Social support and sociability [d], Subcultural tolerance for risk behaviour/anomie [d], Neighbourhood disorder [i], Prior neighbourhood health[d], Population size [d].	ICC=0.060 SNR	NS	- Greater affluence and lower levels of collective efficacy were associated with better SRH. - Greater residential stability and population size were associated with poorer SRH. - Area-level interaction: As area affluence increased, the positive effect of residential stability on poorer SRH decreased.
Browning (2003) [47] /USA	Self-rated health (0/1)	Cross-sectional/ Pooled survey data 1991-1999	8706 49% Men ≥ 18y	A, S, R/E, E, I, MS, Housing tenure, Interview year	342 Neighbourhood clusters	Affluence [d], Poverty [d], Residential stability [d], Immigrant concentration [d].	6.0% (p < 0.001)	NS (Adjusted also for area across time)	- Greater affluence was associated with better SRH.

Cagney (2005) [48] /USA	Self-rated health (ord)	Cross-sectional/ 1995; 1997; 1999	636 35% Men ≥ 55y	A, S, R/E, I, E, MS, Insurance coverage, PA, Weight problems, Interview year	246 Neighbourhood clusters	Age structure [d], Affluence [d], Poverty [d], Residential stability [d], Hypothesised pathway: Collective efficacy [d].	NR	NR	- Greater affluence was associated with lower odds of poorer SRH - Greater residential stability was associated with greater odds of reporting poorer SRH. - Area-level interaction: The detrimental effect of residential stability on SRH decreased as affluence increased.
Craig (2005) [49] /UK	Self-rated health (0/1)	Cross-sectional/ 1999/2000	18466 % Men NR 16-64y	A, S, E, ES	32 Local authorities	Mean household income [d], Income inequality /Gini coefficient [i] /Theil index [i], /90/10 ratio [i].	VC (Se) 0.015 (0.006)	VC (Se) 0.019 (0.007)	- Lower income was associated with poorer SRH.
Cummins (2005) [50] /UK	Self-rated health (0/1)	Cross-sectional/ Pooled data from two surveys 1: 1994-1999; 2: 1995; 1998	13899 45% Men ≥ 16y	A, S, SC, ES	425 Postcode sectors	Unemployment [d], Physical quality of residential environment [i], Public recreation [i], Crime [i], Access to multiple owned food shops [i], Access to banks and building societies [i], Health services [i], Left wing political climate [i], Political engagement [i] Access to private transport [i], Transport wealth [i].	NR	NR	- Poorer physical quality of residential environment, more left wing political climate, lower political engagement, higher unemployment, lower access to private transport, and lower transport wealth were associated with poorer SRH. - Cross-level interaction: Area effects for physical quality of residential environments, left wing political climate, access to private transport, and transport wealth on poorer SRH were greater among non-working individuals.
Drukker (2003) [51] /The Netherlands	Self-rated health (0/1)	Cross-sectional/ Year NR	3394 48% Men 20-65y	A, S, ES, Welfare recipient, Family type. Hypothesised pathway - Lifestyle: Smoking, PA, Drinking Fruit/vegetable intake, BMI	35 City-defined residential neighbourhoods	Composite index of socio-economic deprivation [d], Residential stability [d]. Hypothesised pathways - Housing conditions (person-bedroom index, residential type) [d], Individual perceptions of housing conditions [d], of area characteristics [d], of neighbourhood social contacts, maintenance, cosines, safety [d].	NR	NR	- Greater deprivation was associated with poorer SRH. - When further adjusting for lifestyle, housing conditions, and perception of housing and neighbourhood contexts, the effect of deprivation on SRH was no longer significant.
Drukker	Self-rated	Cross-	3469	A, S, E, ES,	35 City-defined	Composite index of socio-	NR	NR	- No significant main area effects.

(2005) [52] /The Netherlands	health (0/1)	sectional/ Year NR	48% Men 20-65y	Years of n'hood residency, Welfare recipient, Family type	residential neighbourhoods	economic deprivation [d], Residential stability [d].			- Area-level interaction: In stable and very stable areas, higher deprivation was associated with poorer SRH
Franzini (2005) [53] /USA	Self-rated health (cont)	Cross-sectional/ 2001/02	3171 25% Men 18-94y	A, S, R/E, SES, Years of n'hood residency Hypothesised pathways – Physical activity; Social support.	100 Census block groups	Index of neighbourhood impoverishment [d], Hypothesised pathways – Collective efficacy [d], Physical and social disorder [i, d], Social processes relevant to children [d], N'hood racism [d], Social capital [d], N'hood climate of fear [d].	ICC = 0.17 Sign	ICC = 0.19 Sign	- Greater impoverishment was associated with poorer SRH. - Lower social capital, and greater levels of disorder and racism were associated with poorer SRH and mediated the effect of deprivation on SRH (which became non-significant).
Gee (2002) [54] /USA	Self-rated health (cont)	Cross-sectional/ 1993/94	1503 Chinese American % Men NR 18-65y	A, S, E, I, ES, SN, Medical insurance, Acculturation , Perceived racial discrimination	36 Census tracts	Poverty [d], Median housing value [i], Index of dissimilarity (greater segregation of Chinese) [d], Redlined areas (disfavoured home mortgage loan applicants) [i].	NR	NR	- Residing in redlined areas was associated with better SRH.
Gee (2004) [55] /USA	Self-rated health (cont)	Cross-sectional/ 1993/94	1503 Chinese American 47% Men 18-65y	A, S, E, I, ES, SN, Acculturation, Perceived traffic stress, Perceived environment	36 Census tracts	Poverty [d], Vehicular burden [d].	ICC = 0.03 SNR	NR	- Greater poverty was associated with poorer SRH. - Cross-level interaction: Greater vehicular burden was associated with poorer SRH among those perceiving higher levels of traffic stress; when adjusting for this cross-level interaction, effect of poverty on SRH was no longer significant.
Hopman (2003) [56] /Canada	Self-rated health (NR)	Cross-sectional/ 1996/97	9423 31% Men ≥ 25y	A, S	9 Cities	None	NS	NS	- Examined between area variation only.
Hou (2003) [57] /Canada	Self-rated health (cont)	Cross-sectional/ 1996/97	8862 49% Men ≥ 12y	A, S, I, E, Smoking, PA, Emotional support	798 Census tracts	% Low-income [d], Income inequality/ Coefficient of variation [i].	VC = 0.042 ($p \leq 0.001$)	VC = 0.036 ($p \leq 0.001$)	- Higher % of low income associated with poorer SRH. - Higher income inequality associated with better SRH.
Hou (2005) [58]	Self-rated	Cross-	34592	A, S, R/E, E, I,	487 Census	Census tracts:	NR	NR	- At the census tract level, higher income

/Canada	health (ord)	sectional/ 1996/97	47% Men ≥ 12y	Immigrant status	tracts 25 Census metropolitan areas (CMAs)	Income inequality: /Gini index [i], /Median share [i], /Mean logarithmic [i], /Theil index [i], /Squared coefficient of variation [i]; Median income [d], % Adults [d], % University degree [d], % Seniors [d], % Single parent families [d], % Recent immigrants [d], % Non-white [d]. CMAs: Income inequality [i], Economic segregation [d], Median income [d].			and % of people with a university degree were associated with better SRH; greater % of single parent family was associated with poorer SRH. - At the CMA level, within-CMA inequality positively associated with SRH.
Karlsen (2002) [59] /UK	Self-rated health (0/1)	Cross-sectional/ 1993/94	7848 % Men NR ≥ 16y	A, S, SC Race/ethnicity specific analyses	250 Electoral wards	Townsend deprivation index [d], Ethnic group density [d], Individual perceptions of problems of crime and nuisance [d], of lack of amenities [d], of environmental problems [d].	OR (95%CI) Whites: NS Caribbean: NS Indian: NS Pakistani/ Bangladeshi: 1.39 (1.16-1.67)	OR (95%CI) Whites: NS Caribbean: NS Indian: 1.17 (1.03-1.33) Pakistani/ Bangladeshi: 1.60 (1.25-2.03)	- Lower % of ethnic minority was associated with poorer SRH among Whites only.
Lindström (2004) [60] /Sweden	Self-rated health (0/1)	Cross-sectional/ 1994	3602 49% Men 20-80y	A, S, E, Foreign born, Social participation	75 City-defined administrative areas	None	VC (Se) = 0.096 (0.043) ICC = 2.8%	NS	- Examined between area variation only.
Malmström (1999) [61] /Sweden	Self-rated health (0/1)	Cross-sectional/ 1988/89	9240 50% Men 25-74y	A, S, E, BMI, Smoking, PA	837 Small-area market statistics	Care Need Index of deprivation [d], Townsend Deprivation Index [d].	NR	NR	- Greater deprivation (both measures) was associated with poorer SRH.
Mc Culloch (2001) [62] /UK	Self-rated health (0/1)	Cross-sectional/ Pooled survey data	10264 47% Men ≥ 16y	E, ES, R/E, Region of residence, Year of interview,	634 Wards	Townsend index of deprivation [d]	NR	Women VC = 0.18 (p< 0.001) Men	- Greater deprivation was associated with poorer SRH. - Cross-level interaction: Effect of deprivation on SRH was greater among

		1991-1999		Household type, Social housing, Access to car, Lag effect of antecedent SRH. Sex-specific analyses				VC = 0.15 ($p< 0.001$) (Adjusted also for area deprivation)	women residing in social housing.
Pampalon (1999)[63] /Canada	Self-rated health (0/1)	Cross Sectional/ 1992/93	20739 48% Men ≥ 15y 11439 households	A, S, E, I, ES, MS, Smoking, PA, Alcohol consumption	1833 Census enumeration areas 37 Regional subdivisions	None	NR	VC (Se) Enumeration areas = 0.066 (0.030) Regions: NS	- Examined between area variation only.
Patel (2003) [64] /USA	Self-rated health (ord)	Cross-sectional/ 1993/94	2561 Mexican American % Men NR ≥ 65y	A, S, E, I, MS, SN, Stressful life events, Obesity, Smoking, Medical conditions, Disability, Language acculturation, Financial strain	210 Census tracts	Economic disadvantage index [d], % Mexican Americans [d], Residence in a border USA/Mexico community [i].	ICC = 0.161 SNR	NR	- Higher economic disadvantage, lower % of Mexican Americans, and border community location were associated with poorer SRH. - Area-level interaction: Effect of area economic disadvantage on SRH was stronger among residents of border communities than among those of non-border communities.
Reijneveld (2000)[65] /The Netherlands	Self-rated health (0/1)	Cross Sectional/ Year NR	5121 % Men NR ≥ 16 y	A, S, I, E, ES	92 City-defined neighbourhoods 76 Postcode sectors 22 Boroughs	Mean income [d], % Benefit-dependent earners [d], % Low-income earners [d].	VC (Se) = N'hoods: 0.074 (0.027) Postcode sectors: 0.068 (0.025) Boroughs: 0.053 (0.024) (Age-sex adjusted)	NS	- For all three exposures, greater deprivation was associated with poorer SRH but only at the borough-level.
***Reijneveld (2002)** [39] /The Netherlands	Self-rated health (0/1)	Cross-sectional/ Pooled survey data	23269 % Men NR ≥ 16y	A, S, E	484 City-defined neighbourhoods 7 Cities	General practitioner (GP) deprivation score [d], Mean income [d], % Benefit-dependent	NR	VC (Se) - Area (n'hood) GP deprivation	- For all three exposures, greater deprivation was associated with poorer SRH at the neighbourhood level. - Area effects on SRH were not

		1991-2000				earners [d].		score: 0.083 (0.034) Area mean income: 0.077 (0.034) Areas % social benefit: 0.076 (0.034)	consistent across cities.
Robert (2002) [66] /USA	Self-rated health (NR)	Cross-sectional/ 1986	1669 41% Men ≥ 60y	A, S, E, I, R/E, Assets	48 States	Socio-economic disadvantage index [d]	VC (Se) = 0.10 (0.025) ICC = 0.14	VC (Se) = 0.04 (0.018)	- Greater socio-economic disadvantage was associated with poorer SRH.
Stafford (2001) [67] /UK	Self-rated health (ord)	Cross-sectional/ 1991-1993	6901 69% Men 35-55y	A, S, Employment grade, SN, Household deprivation, Perceived housing quality, Problems with n'hood, Community participation	1831 Wards	Townsend Deprivation Index [d]	Women VC (Se) = 0.18 (0.08) Men VC (Se) = 0.30 (0.08) Women PP (PVR)= 34% (18-54%) Men PP (PVR)= 20% (8-43%)	Women : NS Men VC (Se) = 0.20 (0.07)	- Greater deprivation was associated with poorer SRH. - Cross-level interaction: Effect of deprivation on SRH was greater among those in lower employment grade.
***Stafford (2003)** [40] /UK	Self-rated health (0/1)	Cross-sectional/ 1997-1999	5539 70% Men Age NR	A, S, Employment grade, Problems with n'hood Financial problems, Dissatisfaction with standard of living, Position on social ladder	2112 Wards	Townsend Deprivation Index [d]	NR	NR	- Greater deprivation was associated with poorer SRH.
Stafford (2004) [68] /UK and	Self-rated health (0/1)	Cross-sectional/ London:	Pooled data; London	A, S, ES	England: 863 Census wards	Unemployment rate [d], % Single households [d], % Single parent	VC (Se) London: 0.106	London: NS Helsinki:	- In pooled data, higher % of unemployment, % of manual workers, and % single households were

Finland		1991-1993; Helsinki: 2000-2001	5301 61% Men 35-55y; Helsinki 4287 21% Men 40-60y		Finland: 223 City-defined neighbourhoods	households [d], % Manual workers [d].	(0.040)/ ICC = 0.03 Helsinki: NS (Age-sex adjusted)	NS	associated with poorer SRH. - Higher % of single parent households was associated with poorer SRH in London but not in Helsinki.
Stafford (2005) [69] /UK	Self-rated health (0/1)	Cross-sectional/ Pooled data from two surveys 1994-1999; 1995/1998.	8437 45% Men ≥ 16y	A, SC, ES, family type Sex-specific analyses	238 Postal sectors	Individual perceptions of: family ties [d], friendship ties [d], participation [d], integration into the wider community [d], trust [d], attachment to n'hood [d], tolerance [d], being able to rely on others [d] Score of n'hood Political engagement [i], Political climate [i], Crime [i], Access to multiple owned food shops [i], Access to banks and building societies [i], Health services [i], Public recreation [i], Quality of physical environment [i], Transport wealth [i], Access private transport [i], Unemployment [d].	VC (Se)/ % variation between area: Women: 0.212 (0.048)/ 6% Men: 0.141 (0.045)/ 4% (Age adjusted)	VC (Se) Women: 0.125 (0.039) Men: 0.005 (0.033)	- Women: Lower levels of integration into wider community, trust, tolerance, political engagement, access to banks and building societies, and access to private transport, fewer health services, poorer quality of environment, higher unemployment, stronger family ties and more left-wing political climate were associated with poorer SRH. - Men: Higher levels of crime and lower access to multiple food shops were associated with poorer SRH.
Subramanian (2001) [70] /USA	Self-rated health (0/1)	Cross Sectional/ 1993/94	144692 43% Men 18-98y	A, S, R/E, I, MS, Smoking, Health check-up, Health insurance coverage	39 States	Median income per capita[d] Income inequality/Gini coefficient [i], Social capital [d].	VC (Se) = 0.083 (0.020)	VC (Se) = 0.039 (0.010)	- Greater median income and social capital level were associated with better SRH. - Cross-level interaction: Greater income inequality was associated with better SRH among high income group only.
Subramanian (2002) [71] /USA	Self-rated health (0/1)	Cross-sectional/ 2000	21456 42% Men 18-89y	A, S, R/E, E, I, MS, Perceived individual trust	34 Communities	(d) Social trust (social capital) [d]	VC (Se) = 0.045 (0.015)	NS	- Greater level of social trust was associated with better SRH. - When adjusting for individual perceived

									trust, main effect of social capital no longer significant - Cross-level interaction: Protective effect of community social capital among high-trust individuals; among low-trust individuals, the effect was reversed.
Subramanian (2003) [72] /USA	Self-rated health (0/1)	Cross-sectional/ 1995; 1997	201221 47% Men ≥ 18y	A, S, R/E, MS, E, I, ES, Health insurance coverage	50 States	Income inequality/Gini coefficient [i], % Black residents [d].	VC (Se) = 0.031 (0.007) (Also adjusted for area income inequality)	VC (Se) = 0.029 (0.007) (Also adjusted for area income inequality)	- Greater income inequality associated with poorer SRH.
Subramanian (2005) [73] /USA	Self-rated health (0/1)	Cross-sectional/ 2000	21572 42% Men 18-89 y	A, S, R/E, MS, E, I	36 Communities	None	VC (Se) = 0.045 (0.014)	NS	- Examined between area variation only.
Subramanian (2005) [74] /USA	Self-rated health (0/1)	Cross-sectional/ 2000	51316 47% Men ≥ 18y	A, S, R/E, MS, E, I	207 Metropolitan areas	Black/white dissimilarity index [d], Black isolation index [d], White isolation index [d], Total population size [d], % Poor [d].	NR	VC (Se) = 0.037 (0.008) White/Black disparity in reporting poorer SRH 0.172 (0.48) such that: Whites 0.060 (0.012) Blacks: 0.090 (Se NR)	- Covariation between the metropolitan area variation in SRH for Whites and the White/Black disparity in poorer SRH: Greater White/ Black disparity was associated with better SRH among Whites. - Greater Black isolation index was associated with poorer SRH among Blacks only.
Veenstra (2005) [75] /Canada	Self-rated health (0/1)	Cross-sectional/ 2002	1435 53% Men ≥ 18y	A, S, E, I, Trust in community members, Political trust, Participation in voluntary associations	25 Communities	Number public spaces per capita [i], Number of voluntary organisations per capita [i], Community and political trust [d], Median household income [d], Income inequality/ % of income held by poorest 50% households [i].	NS	NR	- No significant area effects.
Wen (2003) [76]	Self-rated	Cross-	3459	A, S, R/E, E, I,	343	Affluence [d],	NR	NR	- Higher affluence and education levels

/USA	health (ord)	sectional/ 1996; 1997; 1999	40% Men ≥ 18y	MS, Smoking, High blood pressure	Neighbourhood clusters	Education level [d], Poverty [d], Income inequality/Gini coefficient [i], Prior n'hood health [d]. Hypothesised pathways: Physical disorder [i], Health enhancing services [i], Social resources [d], Crime [i].			were associated with better SRH. - Potential pathways linking affluence to SRH included crime, social resources, and the physical environment.
Xi (2005) [77] /Canada	Self-rated health (0/1)	Cross-sectional/ 1996	30820 46% Men ≥ 25y	A, S, E, I, MS, PA, Smoking	Public Health Units	Median income [d], Income inequality/Gini coefficient [i].	VC (Se): 0.042 (0.012)	VC (Se): 0.020 (0.008)	- Lower median income and higher income inequality were associated with poorer SRH.

CVD and risk factors									
Citation /location	**Health Outcome /Analytic variable**	**Design/year of data collection (individual level)**	**Individual sample size (sex/age range)**	**Individual characteristics adjusted for**	**Sample size of areas**	**Area-level exposures**	**Crude between area variation**	**Adjusted between area variation**	**Significant adjusted area effects**
Chaix (2003) [78] /France	Overweight (0/1) Smoking (0/1) Drinking (0/1) Physical inactivity (0/1)	Cross-sectional/ 1999	12948 49% Men 16-75y	A, S, E, I, ES, MS, OS	95 Administrative departments	Gross domestic product (GDP) per capita [d], Type of county of residence (rural, small town, medium sized city, major city) [i].	NR	NR	- Higher GDP was associated with greater odds of being a dependent smoker among both women and men, and with being a dependent drinker among women only. - Cross-level interaction: Higher GDP was associated with overweight among blue-collar workers only.
Chaix (2004) [79] /France	Smoking (1/0; cont)	Cross-sectional/ 1999	12948 49% Men 16-75y	A, S, E, I, ES, MS, OS	95 Administrative departments	Gross domestic product (GDP) per capita [d], Type of county of residence (rural, small town, medium sized city, major city) [i].	NR	Smoking (0/1): VC (Se) = 0.014 (0.007)	- Higher GDP was associated with greater odds of smoking. - Among smokers, higher GDP was associated with greater levels of tobacco consumption.
Chang (2005) [80] /USA	BMI (cont)	Cross-sectional/ 1996-1998	143931 44% Men ≥ 18y	A, E, I Census region Sex-race specific analyses	226 Metropolitan statistical areas (MSAs)	Income inequality/Gini coefficient [i], Median household income [d], Population size [d].	VC = White women: 0.320 ($p<0.001$); White men: 0.174 ($p<0.001$); Black women: 0.780 ($p<0.001$); Black men: 0.473 ($p<0.001$)	NR	- Greater income inequality was associated with lower BMI among White women only. - Greater median income was associated with lower BMI among White women and men only.
Chuang (2005) [81] /USA	Smoking (cont)	Cross-sectional/ Pooled data from five surveys	8121 45% Men 25-74y	A, S, E, I, R/E	82 Census tracts and/or Census blocks	SES score [d], Within a one-mile radius around individual residence: Density of convenience	NR	NR	- Lower SES, higher convenience store density, and lower distance to convenience store were associated with greater odds of smoking, but in separate models only.

		1979-1990				stores [i], Distance of convenience stores [i], Number of convenience stores [i].			- Cross-level interaction: In more affluent areas only, high-SES individuals were less likely to smoke. - Area-level interaction: In areas with higher convenience store density, the odds of smoking were similar across all income groups.
Cubbin (2005) [82] /USA	Behaviour change (0/1) 12-year probability experiencing CHD event (cont)	Cross-sectional/ Pooled data from five surveys 1979-1990	8197 45% Men 12-74y	A, S, R/E, MS, SES, City, Survey year	82 Census tracts and/or Census blocks	Townsend Index of deprivation [d].	NR	Significant, but no variance estimates reported (Also adjusted for area deprivation)	- Higher deprivation was associated with greater odds of no positive behaviour changes.
Diez-Roux (1999) [83] /USA	Dietary intake (cont): fruits, vegetables, meat, fish. Unhealthy dietary intake (0/1): fruits, vegetables, meat, fish. Nutrients intake (cont): saturated fat, polyunsaturated fat, cholesterol.	Cross-sectional/ 1987; 1989	13095 45% Men 45-64y	I, Residential location Sex-race specific analysis	Census block groups	Median household income [d]	NR	NS	- White men: Lower income was associated with lower intake of fruits and fish, and with greater odds of unhealthy dietary intake of fruits. - Black men: Lower income was associated with greater intake of cholesterol and polyunsaturated fat. - White women: Lower income was associated with lower intake of fruits and fish, greater intake of meat, and greater odds of unhealthy dietary intake of fish and meat. - Black women: Lower income was associated greater odds of unhealthy dietary intake of fruits.
Diez-Roux (2000) [84] /USA	Sedentarism (0/1) Smoking (0/1) BMI (cont) HBP (0/1)	Cross-sectional/ 1990	70534 43% Men ≥ 18y	I, R/E Sex-income specific analyses	44 States	Income inequality/Robin Hood Index [1]	NR	NR	- Among lower income women, greater inequality was associated with higher BMI and greater odds of HBP. - Among higher income women, greater inequality associated with greater odds of smoking. - Among both men and women and across categories of individual-level income, greater inequality associated

									with greater likelihood of sedentary behaviour.
Duncan (1999) [85] /UK	Smoking (0/1)	Cross-sectional/ 1984/85	9003 % Men NR Age NR	A, S, E, SC, ES, MS, Housing tenure	396 Electoral wards 198 Regions	Ward-level composite index of deprivation [d]	NR	VC (Se) = Ward: 0.051 (0.02) Region: NS	- Greater deprivation was associated with greater odds of smoking.
Ecob (2000) [86] /UK	Smoking (1/0; cont) Alcohol consumption above safe limit (0/1) Alcohol consumption levels (cont) Diet (0/1) Exercise (0/1)	Cross-sectional/ 1987/88	15y:1009; 35y: 985; 55y:1042; Sex-age specific analyses	E, I, SC, MS, Moved in the 5 years preceding interview	Postcode sectors	Carstairs-Morris Index of deprivation [d]	NR	All age/both sex VC (Se) = Unhealthy diet 0.17 (0.07)	- Greater deprivation was associated with unhealthy diet lack of exercise, and smoking. - Cross-level interaction: Among lower income groups, deprivation was associated with unhealthy diet. - Among those aged 35y or 55y, greater deprivation was associated with unhealthy diet, lack of exercise, and smoking.
Ewing (2003) [87] /USA	Any PA (cont) Meeting guidelines for PA (0/1) Walking (cont) Obesity (0/1) BMI (cont) HBP (0/1) Diabetes (0/1) CHD (0/1)	Cross-sectional/ Pooled survey data 1998-2000	206992 % Men NR 18-75y	A, S, R/E, E, Smoking, Fruit/ vegetable consumption,	83 Metropolitan areas (MAs) 448 Counties	Metropolitan sprawl index [i], County sprawl index [i].	NR	NR	- Less sprawl at the county and MA levels were associated with higher levels of walking for leisure - Less sprawl at the county level was associated with lower BMI and lower odds of obesity and HBP.
Fisher (2004) [88] /USA	Walking: Latent variable comprising three items (cont): 1: Walk/ stroll in n'hood 2: Walk/any physical activity with	Cross-sectional/ 2001	582 31% Men ≥ 65y	A, S, R/E, MS, E, I, Health status, Walking efficacy	56 City-defined neighbourhoods	Social cohesion [d], N'hood problems [d], Safety [d], % Low income [d], % White residents Senior population [d], density [d], Facilities per n'hood acre [i].	ICC for the three items of walking - SNR: Item 1: ICC = 0.04 Item 2: ICC = 0.03, Item 3: ICC = 0.02.	NR	- Higher social cohesion, % of low-income households, % of senior residents, number of facilities for walking, and % of White residents, were associated with greater levels of walking.

	neighbours 3: Walk/any physical activity in n'hood park								
Kairouz (2005) [89] /Canada	Drinking (1/0; cont), Alcohol Dependence (0/1)	Cross-sectional/ Year NR	4918 % Men NR ≥ 15y	A, S, MS, E, I	373 Census subdivisions	None	NS	NS	- Examined between area variation only.
Kavanagh (2005) [90] /Australia	Any physical activity (0/1) Walking (0/1) Cycling (0/1) Jogging (0/1) Swimming (0/1)	Cross-sectional/ Year NR	2349 44% Men 18-74y	A, S, E, I, OS	50 Collectors districts	% Low-income [d]	VC (Se) = Overall PA : 0.127 (0.043) Walking : 0.242 (0.079) Cycling : 0.226 (0.073) Jogging: 0.159 (0.058) Swimming : 0.142 (0.061) (Age-sex adjusted)	VC (Se) = Overall PA : NS Walking : 0.209 (0.071) Cycling : 0.201 (0.067) Jogging: NS Swimming : 0.127 (0.058)	- Higher % low-income was associated with lower levels of any physical activity and jogging.
Leyland (2005) [91] /UK	Presence of one or more CVD conditions (0/1)	Cross-sectional/ 1998/99	8804 43% Men 18-74y	A, S, SC, Smoking	312 Postcode sectors	Carstairs Index of deprivation [d], Social class [d], Smokers [d].	ICC = 0.011 SNR (Age-sex adjusted)	ICC = 0.010 SNR	- Greater deprivation was associated with greater odds of having one or more CVD conditions.
Li (2005) [92] /USA	Walking (cont)	Cross-sectional/ 2001	577 36% Men 65-94y	A, S, E, I, R/E, MS, Perceptions of: Proximity to recreational facilities, Safety for walking, Safety from traffic, Number of	56 City-defined neighbourhoods	Density of places of employment [i], Density of households [i], Number of street intersections [i], Total green and open spaces for recreation [i]. Within 0.5 mile radius around the home: Number street	ICC = 0.28 SNR	NR	- Greater density of places of employment, density of household, number of street intersections, and number of green and open spaces were associated with higher levels of walking. - More favourable perception of number of recreational facilities and safety for walking were associated with higher levels of walking. - Cross-level interaction: In areas with

				nearby recreational facilities		intersections [i], Total green areas [i].			greater street intersections, levels of walking were higher among those perceiving greater safety from traffic.
Lindström (2003) [93] /Sweden	Leisure-time physical activity (0/1)	Cross-sectional/ 1994	3377 49% Men 20-80y	A, S, E, Foreign born, Social participation	74 City-defined administrative areas	Residential mobility (social capital) [d]	VC (Se) = 0.171 (0.053)	NS	- No significant area effects.
Lindström (2003) [94] /Sweden	Smoking (0/1)	Cross-sectional/ 1994	3393 49% Men 20-80y	A, S, E, Foreign born, Social participation	77 City-defined administrative areas	None	VC (Se) = 0.085 (0.034) ICC = 0.025	NS	- Examined between area variation only.
Morland (2002) [95] /USA	Meeting dietary guidelines in (0/1): Fruits & Vegetables; Cholesterol; Total fat; Saturated fat	Cross-sectional/ 1993-1995	2392 Black Americans 36% Men 8231 White Americans 46% Men 35-74y	S, E, I Race/ethnicity specific analyses	208 Census tracts	Number of supermarkets [i], Number of small grocery stores [i], Number of full service restaurants [i], Number of fast-food restaurants [i].	NR	NR	- Black Americans: Greater number of supermarkets was associated with greater odds of meeting dietary guidelines for fruits and vegetable intake, total and saturated fat; greater number of full-service restaurants was associated with greater odds of meeting dietary guidelines for saturated fat. - White Americans: Greater number of supermarkets was associated with greater odds of meeting dietary requirements for total and saturated fat.
Morris (2001) [96] /UK	CHD incidence (0/1)	Follow-up/ 1978-1980; 1996	7735 Men only 40-59y	A, SC, Blood pressure, BMI, Serum total cholesterol, PA, Smoking, Alcohol consumption	24 Towns	Water hardness [i], Max temperature [i], Min temperature [i], Daily rainfall [i], Sunshine hours [i].	VC = 0.028 SNR (Age adjusted)	VC = 0.014 SNR	- No significant area effects.
***Reijneveld (2002)** [39] /The Netherlands	Smoking (0/1)	Cross-sectional/ Pooled survey data 1991-2000	23269 % Men NR ≥ 16y	A, S, E	484 City-defined neighbourhoods 7 cities	General practitioner (GP) deprivation score [d], Mean income [d], % Benefit-dependent earners [d].	NR	NS	- For all exposures, greater deprivation was associated with greater likelihood of smoking. - Area effects on smoking were not consistent across cities.
Robert (2004) [97] /USA	BMI (cont)	Cross-sectional/ 1986	3617 38% Men ≥ 25y	A, R/E, MS, E, I, ES, Assets, SN, PA, Smoking, Financial chronic stress, Number of stressful events	48 States	Socio-economic disadvantage index [d], Income inequality/Gini coefficient [i], % Black [d].	Women: ICC = 0.06 (p<0.001) Men: ICC = 0.11 (p<0.001)	VC (Se) = Women: 1.05 (0.33) (p<0.01) Men: 1.74 (0.48) (p<0.001)	- Higher socio-economic disadvantage and income inequality were associated with higher BMI among women only.

				Sex-specific analyses					
Scribner (2000) [98] /USA	Alcohol consumption (cont)	Cross-sectional/ Year NR	2604 % Men NR > 18y	A, S, R/E, E	24 Census tracts	Mean distance to the closest alcohol outlet [i]	11.5% SNR	NR	- Greater mean distance to closest alcohol outlet was associated with lower alcohol consumption.
***Stafford (2003)** [40] /UK	Wais to hip ratio (cont)	Cross-sectional/ 1997-1999	5539 70% Men Age NR	A, S, Employment grade, Problems with n'hood, Financial problems, Dissatisfaction with living standard, Position on social ladder	2 112 Wards	Townsend Deprivation Index [d]	NR	NR	- Higher deprivation was associated with higher mean waist/hip ratio.
Stjärne (2004) [99] /Sweden	Myocardial infarction (MI) (rate)	Case-control/ 1992-1994	Case: 1546 69% Men Control: 2064 66% Men 45-70y	A, E, OS, Labour market position, Cohabiting/non cohabiting, SN, Smoking, BMI, Hypertension, Sex-specific analyses	862 Small residential areas	Townsend Deprivation Index [d], Congdon's Index of social fragmentation [d].	Women: VC = 0.146 SNR Men: VC = 0.065 SNR	NR	- Greater deprivation and social fragmentation were associated with greater risk of MI; the effect was stronger among women than among men.
Sundquist (1999) [100] /Sweden	Obesity (0/1) Smoking (0/1) Physical activity (0/1)	Cross-sectional/ 1988/89	9240 % Men NR 25-74y	A, S, E	8519 Small-area market statistics	Care Need Deprivation Index [d], Townsend Deprivation Index [d].	NR	NR	- Greater deprivation (as measured by both indices) was associated with greater likelihood of smoking, physical inactivity, and obesity.
Sundquist (2004) [101] /Sweden	Coronary heart disease (rate)	Follow-up/ 1995-1999	2637628 50% Men 40-64y	A, I Sex-specific analyses	8547 Small-area market statistics	Care Need Deprivation Index [d]	NR	Women: VC (Se) = 0.084 (0.009) ICC = 0.025 Men: VC (Se) = 0.034 (0.004) ICC = 0.010	- Greater deprivation was associated with higher risk of developing coronary heart disease.
Sundquist	Coronary	Follow-up/	25319	A, S, E, I,	6145 Small-area	% Less than 10y of	NR	VC (Se) =	- Lower education and income levels

(2004) [102] /Sweden	heart disease (rate)	1986-1993; 1997	49% Men 35-74y	Smoking, Years of n'hood residency	market statistics	education [d], % Income in lowest national quartile [d].		0.25 (0.10) (Also adjusted for area income and education)	were associated with higher risk of developing coronary heart disease.
Tonne (2005) [103] /USA	Survival after acute myocardial infarction (AMI) (cont)	Cross-sectional/ 1995; 1997; 1999; 2001	3423 58% Men ≥ 25y	A, S, R/E, Medical history; Clinical complications; AMI order and type	111 Census tracts	Median income [d], % Below poverty line [d], % Low education [d], % Overcrowding [d], Composite deprivation score (four measures) [d].	NR	NR	- Greater levels of overcrowding, % living below the poverty line, % low education, greater deprivation, and lower median income were associated with lower survival after AMI.
Twigg (2000) [104] /UK	Smoking (0/1) Alcohol consumption (0/1)	Cross-sectional/ Year NR	Sample size NR % Men NR ≥ 16y	A, S, MS	Wards	% Population with no car [d], % Population with dual car ownership [d], % Population privately renting [d], % Population higher social class (I or IIa) [d].	NR	NR	- Higher % of population with no car and privately renting were associated with greater odds of smoking, whereas higher % of dual car ownership was associated with lower odds of smoking. - Higher % of population of higher social class, privately renting, and dual car ownership were associated with greater odds of problem drinking. - Cross-level interactions: Single women living in areas of higher % of privately rented households had higher odds of problem drinking, and those living in more affluent areas had higher odds of smoking.
Van Lenthe (2002) [105] /The Netherlands	Overweight (0/1)	Cross-sectional/ 1991	8897 49% Men 20-70y	A, S, E	86 Administrative neighbourhoods	Index of neighbourhood deprivation [d]	NR	NS	- Greater deprivation was associated with higher odds of overweight. - Cross-level interactions: Higher deprivation was associated with greater odds of overweight among women, in the ≥ 49 y group, and in all education groups except highest.
van Lenthe (2005) [106] /The Netherlands	Walking/ cycling to shops/work (0/1); Walking/ cycling/ gardening in leisure time (0/1);	Cross-sectional/ 1991	8767 49% Men 20-70 y	A, S, E	78 Administrative neighbourhoods	Index of neighbourhood deprivation [d] General physical design of neighbourhood [i], Quality green facilities [i], Noise pollution from traffic [i], Police attention required [i], Availability food shops [i],	NR	NR	- Greater deprivation was associated with lower odds of almost never walking/cycling to shops or work, with greater odds of almost never walking, cycling or gardening in leisure time, and with lower odds of sport participation. - Poorer general physical design and higher levels of noise pollution were associated with greater odds of almost

	Sport participation (0/1)					Availability sports and recreational facilities [i].			never walking/cycling and gardening during leisure time. - Less proximity to sports facilities and lower levels of police attention were associated with lower participation in sport activities. - Cross-level interactions: Odds of almost never walking/cycling to shops or work were lower in the 20-49 y group in areas with greater noise pollution; greater in the 50-70 y group in areas with less proximity to shops; and lower in the 50-70 y group in areas with greater deprivation.
Wendel-Vos (2004) [107] /The Netherlands	Walking/ cycling for (cont): Recreation; Commuting; Overall.	Cross-sectional/ 1998	11541 46% Men 20-59 y	A, S, E	300m radius and 500m radius around postal code	Square area of green and recreational space: Woods [i], Parks [i], Sport grounds [i], Allotments [i], Day-trip grounds [i].	Between person variance 100 times greater than between postal code variance; SNR	NR	- In areas defined by the 300m radius only, square area of sport ground was associated with more overall cycling, cycling for leisure and for commuting purposes; square area of parks was also significantly associated with more cycling for commuting.

Mortality									
Citation /location	**Health Outcome /Analytic variable**	**Design/year of data collection (individual level)**	**Individual sample size (sex/age range)**	**Individual characteristics adjusted for**	**Sample size of areas**	**Area-level exposures**	**Crude between area variation**	**Adjusted between area variation**	**Significant adjusted area effects**
Borrel (2002)[108] /Spain	Mortality all injury (rate); Mortality from (rate): Traffic injury; Falls; Drug overdose; Suicide; Other injuries.	Cross-sectional/ 1992-1998	4393 63% Men > 19y	E Age-sex specific analyses	38 City-defined neighbourhoods	% Unemployed men [d], % Men in jail [d].	NR	Mortality from all injury Men: 0.016 (p=0.001) Women: 0.027 (p<0.001) (also adjusted for % unemployed men); Mortality from drug overdose Women: 0.295 (p<0.001) (also adjusted for % men in jail)	- Higher % of unemployed men was associated with overall injury mortality, and with mortality from falls among men only. - Higher % of men in jail was associated with greater likelihood of fatal drug overdose.
Bosma (2001) [109] /The Netherlands	All-cause mortality (rate)	Cross-sectional/ 1991	8506 % Men NR 15-74y	A, S, E, OS, Health status, Being unemployed or disabled, Severe financial problems	86 Administrative neighbourhoods	% Primary schooling [d], % Unskilled manual workers [d], % Unemployed/disabled [d], % Severe financial problems [d].	Significant, but no variance estimates reported.	NS	- Greater % of unemployment/disability and presence of severe financial problems were associated with greater all-cause mortality.
Curtis (2004) [110] /UK	All-cause mortality (rate)	Longitudinal /1939; 1981	62719 40% Men 40-59y	A, S, SC, MS, ES, Housing tenure	192 Categories of residential areas	1981 Ward of residence: Carstairs Index of deprivation [d], Broad regional location [d].	NR	NR	- Mortality risks were lower for people originating from affluent areas in 1939 after controlling for 1981 area type.

						1939 Area of residence: In economic depression [d], Population density [d], % Population semi-skilled or unskilled manual work[d] % Population in overcrowded housing [d], Unemployment rate [d].			
Franzini (2003) [111] /USA	Years of life lost (YLL) to premature CVD mortality (cont)	Cross Sectional/ 1991	50268 % Men NR ≥ 25y	S, R/E, Age adjusted education	12344 Census block groups; 3788 Census tracts; 247 Counties	Census block groups: Median house value [d] Census tracts: % College degree [d], % Blacks [d], % Hispanics [d], % Homeownership [d]. Counties: % High school diploma [d], % Some college [d], % College degree [d], Median income [d], Poverty rate [d], Unemployment rate [d], % Blacks [d], % Hispanics [d], % Homeownership [d], Crime index [d], Income inequality /Robin hood index [i], /90/10 ratio [i].	NR	Block groups: NS Census tracts: 3.10 ($p<0.05$) County: 0.46 ($p<0.05$) (Also adjusted for block group, census tract, and county variables).	- Block-group level: Higher median house value was associated with reduced YLL. - Census tract level: Greater % Blacks and % Hispanics were associated with decrease in YLL for Blacks and Hispanics. - County level: Higher % of homeownership was associated with lower YLL, and worse crime index was associated with increased YLL. - Cross-level interactions: Effect of lower crime at the county level and YLL was weaker among women. - Effect of median house value on YLL was greater among high-education individuals. - Effect of county level homeownership on YLL was stronger for Blacks. - Effect of median house value of census block groups on YLL more important in counties with higher % of homeownership.
Hembree (2005) [112] /USA	Overdose mortality (ratio)	Case-control/ 1996	1178 77% Men 15-64y	A, S, R/E	59 Residential community districts	(d) Median household income [d], (d) N'hood drug use [d]. External built environment - % buildings in: Dilapidated condition [i], Deteriorating condition [i], External wall problems [i], Window problems [i], Stairway problems [i], Clean streets/sidewalks [i],	NR	NR	- All characteristics of the external built environment, except % buildings with any external wall problems, were associated with a higher likelihood of overdose mortality. - Greater % of housing units experiencing toilet breakdowns, needing additional heating in winter, with large areas of peeling plaster or paint were associated with higher likelihood of overdose mortality.

						Structural fires [i]. Internal built environment - % housing units with: Toilet breakdowns [i], Non-functioning kitchen facilities [i], >3 Heat breakdowns in winter [i], Additional heating needs in winter [i], Large area of peeling plaster/paint [i], Internal water leakage [i].			
Jaffe (2005) [113] /Israel	All-cause (rate); CVD mortality (rate); Non-CVD mortality (rate)	Follow-up 1983-1992	141683 45% Men 45-89y	MS, E, Origin, Continent of origin Age-sex specific analyses.	882 Statistical areas	Religious affiliation [d], SES index [d].	NR	VC (Se): Women: NS Men all ages: 0.020 (0.005) (Also adjusted for area variables)	- Greater deprivation was associated with greater risk of mortality. - Adjusting for area SES, stronger religious affiliation was associated with lower risk of all-cause mortality and CVD mortality among men and women, and with lower risk of non-CVD mortality among men only. - Area-level interaction: In lower and average SES areas, religious affiliation was protective of mortality among women only.
Jaffe 2005) [114] /Israel	All-cause mortality (rate)	Follow-up/ 1983-1992	131156 45% Men 45-89y	MS, E, I, Origin, Number of rooms in the house, Household amenities score Age-sex specific analyses	882 Statistical areas	SES index [d]	NR	VC (Se) Women 45-69y: 0.023 (0.010)	- Greater deprivation was associated with greater risk of mortality.. - Cross-level interaction: Effect of deprivation on mortality risks were lower among low-income men in the 45-69 y group, and higher among high-income men in the 70-89 y group.
Jerrett (2005) [115] /USA	All cause mortality (rate) Mortality by (rate): Ischemic heart disease (IHD);	Follow-up/ 1982-2000	22905 % Men NR Age NR	44 individual variables: demographics, lifestyle, dietary, occupation, education	267 Zip Code areas	Income [d], Income inequality [d], Education [d], Population size [d], Racial composition [d], Unemployment [d], Potential exposure misclassification [i],	NR	NR	- Greater concentration levels of PM_{25} and O_3, and presence of highway intersection were associated with greater risk of all-cause mortality, and with mortality from IHD, cardiopulmonary diseases, and with diseases of the endocrine and digestive systems.

	Cardiopulmonary; Lung cancer; Digestive cancer; Other cancers; Endocrine; Diabetes; Digestive; Male accidents; Females accidents; All others					% Air conditioning [i], Particulate matter (PM_{25}) [i], Ozone (O_3) [i], Intersection with highway [i].			- When further adjusting for area SES, social factors, and % air conditioning, the effect of air pollution on all-cause and cause-specific mortality was no longer significant.
Lochner (2003) [116] /USA	All cause mortality (rate); Mortality by (rate): Heart disease; Cancer; Other causes	Cross-sectional/ 1994-1996	Sample size NR 68% Men 45-64y	A Sex-race specific analyses	342 Neighbourhood clusters	% Perceived reciprocity [d], % Perceived trust [d], Associational membership per capita [d], Composite index of economic disadvantage [d].	NR	NR	- Greater economic disadvantage was associated with higher risk of all-cause mortality and mortality from heart disease, and with mortality from "other causes" except among Black men. - Higher levels of reciprocity, trust, and civic participation were associated with lower risk of all-cause mortality and mortality from "other causes", and with lower mortality from heart disease among Whites only.
Marinacci (2004) [117] /Italy	All cause mortality (rate); Mortality by (rate): Diabetes; Stomach cancer; Lung cancer; Psychol discomfort; CHD; Cerebro-vascular diseases; Respiratory diseases.	Longitudinal /1971-1980; 1981-1991; 1991-1999.	1971/80: 799564; 1981/91: 889432; 1991/99: 821736. % Men NR ≥ 15y	E, Place of birth, Composite index of housing conditions Sex-age specific analyses	23 City-defined neighbourhoods	Neighbourhood Deprivation index [d]	NR	NR	- Greater deprivation was associated with higher risk of mortality. - Cross-level interactions: Effect of deprivation on mortality by coronary heart and respiratory diseases was greater among women and men aged 15 to 64 years; deprivation increased risk of mortality by cerebrovascular diseases but only among women.
Martikainen	All cause	Follow-up/	251509	E, SC, Housing	55 City-defined	% Manual workers [d],	Average	Average	- Greater % of manual workers was

(2003) [118] /Finland	mortality (rate); Mortality by (rate): Lung cancer; Other cancers; Disease of circulatory system; Other diseases; Accidents/ violence; Alcohol-related mortality	1991-1995	Men only ≥ 25y	tenure, MS, Housing density Age-specific analyses	neighbourhoods	% People aged > 60y [d], Social cohesion [d].	relative deviation i.e. how many % on average does the mortality rate of an area differs from total mortality rate: 25-64y = 16.6% Over 64y = 8.1 % SNR (Age adjusted)	relative deviation 25-64y = 4.1% Over 64y = 2.6% SNR	- associated with higher risk of all-cause mortality, higher risk of mortality from CVD, accident/violence, and alcohol in the 25-64y group, and with higher risk of mortality from CVD in the ≥ 65y group. - Lower social cohesion was associated with higher risk of all cause mortality and mortality from accident/violence and alcohol in the 25-64y group only. - Cross-level interaction: In the ≥ 65y group, those with lower education had higher risk of mortality in areas with both high and low % of manual workers and in areas with high social cohesion.
Mohan (2005) [119] /UK	Overall mortality (rate)	Follow-up/ 1984/85-2001	7578 % Men NR Age NR	A, S, SC, Housing tenure, Smoking, PA, Diet, Social capital (feel part of community, people to rely upon, feel lonely)	396 Electoral wards; 198 Parliamentary constituencies	Carstairs deprivation index [d], % In voluntary activity [d], % Core volunteers [d], % Social activity [d], % Altruistic activity [d], % Political activity [d], % Voters in last election [d], % Thinking local friends are important [d], % Belonging to n'hood [d], % Would work to improve n'hood [d], % Talking to neighbours [d] % Feeling the local area is friendly [d], Standardised blood donation rate [d].	NR	NR	- Greater deprivation and lower % of persons involved in voluntary, core volunteering, social, altruistic, and political activities were associated with higher risk of mortality, but in separate models only.
Roos (2004) [120] /Canada	Overall mortality (rate)	Follow-up/ Nova Scotia: 1990-1999; Manitoba: 1996/97-2002	Nova Scotia 2116 48% Men 18-75y Manitoba 8032	A, S, I, E, Smoking, Diabetes, BMI, Residential mobility	Census enumeration areas	Household income [d], Dwelling value [i], % Education < grade 9 [d], Unemployment rate [d], % Single mother [d].	NR	NR	- No significant main area effects. - Cross-level interaction: For Manitoba only, lower income individuals had greater mortality risk in more affluent areas than in less affluent areas.

			47% Men 18-75y						
Subramanian (2005) [121] /USA	Overall mortality (rate)	Cross-sectional/ 1989-1991	79813 cells (6016425 individuals grouped in 79813 cells cross-tabulated by age, sex, race/ ethnicity) % Men NR ≥ 0y	A, S, R/E	5532 Census block groups 1307 Census tracts	% Population living below poverty line in the census tracts [d]	NR	Census tracts: Blacks VC = 0.524 ($p < 0.001$) Whites VC = 0.085 ($p < 0.001$)	- Greater poverty was associated with higher mortality risk especially among Blacks. - Poverty accounted for racial/ ethnic-specific heterogeneity in mortality at the census tract level.
Veugelers (2001) [122] /Canada	Overall mortality (rate)	Follow-up/ 1990-1999	2116 48% Men 18-75y	A, S, E, I, Smoking, Diabetes, BMI	705 Census enumeration areas	Household income [d], Dwelling value [i], % Education < grade 9 [d], Unemployment rate [d], % Single mother [d]	NR	NR	- No significant main area effects. - Cross-level interaction: Within affluent area only, mortality risks were lower among high-income individuals.
Waitzman (1999) [123] /USA	Overall mortality (rate)	Follow-up/ 1986-1994; 1995	136956 % Men NR 35-65y	A, R/E, E, I	34 Metropolitan areas	Spatial inequality/ economic segregation [d], Income inequality/Gini coefficient [i], Median income [d].	NR	NR	- Greater economic segregation and income inequality were associated with greater risk of mortality.
Yen (1999) [124] /USA	Overall mortality (rate)	Follow-up/ 1983; 1994	996 43% Men 36-96 y	A, S, R/E, Smoking, BMI, Alcohol consumption, Perceived health status	Census tracts	Social environment score: Population SES: Per capita income [d], % White-collar employees[d], % Crowding [d]; Commercial stores per 1000 people [i]; Environment/housing: Population size [d], Area (square miles) [i], % Renters [d], % Single-family dwellings [d].	NR	NR	- Poorer social environment was associated with higher risk of mortality. - Lower population SES, lower environment/housing score, and more commercial stores were associated with higher risk of mortality. - Cross-level interactions: Lower environment/housing score and higher population SES were associated with greater risk of mortality among lower income individuals.