Appendices

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Appendix 1: Supplemental data for chapter 2

Methods S1.1 Additional detail on statistical methods for multiple imputation and model estimation

We used multiple imputation with chained equations to minimise the potential for bias from missing data in the 2010 mortality registry. Around 20% of mortality records were missing data on education, and 8% were missing data on cause of death (defined by ICD-10 chapter 18 (codes R00-R99), over 96% of which were assigned as generic unknown cause of death codes). This approach produces unbiased effect estimates under the assumption that data were missing at random with respect to the set of covariates included in the imputation model.[1] To improve our imputation model, we included the following additional covariates which might predict cause of death:

- From death certificates: individual-level occupation, race, marital status, whether doctor was present for death, and location of death (accessed through the CIDACS project (https://cidacs.bahia.fiocruz.br).
- From Brazilian government websites[2,3]: municipality-level mean wages, number of doctors, number of health facilities, population size, and urbanisation level.

Using the MICE package on R (version 3.5) we imputed the data five times. We computed rate ratios and interaction terms separately for each of the five imputed datasets and combined them using Rubin's rules.[1]

We conducted statistical modelling using Stata 16. We initially used Stata's inbuilt maximum likelihood function to estimate models, but because of long computation times and numerically similar estimates, we estimated the final models using MLwiN's penalised quasi-likelihood procedure, using the 'runmlwin' package in Stata to call MLwiN v3.04.

References

[1] White IR, Royston P, Wood AM. Multiple imputation using chained equations: Issues and guidance for practice. Stat Med 2011;30:377–99. https://doi.org/10.1002/sim.4067.

[2] DATASUS n.d. http://www2.datasus.gov.br/DATASUS/index.php?area=0205 (accessed December 3, 2018).

[3] IBGE | Portal do IBGE | IBGE n.d. https://www.ibge.gov.br/ (accessed January 16, 2020).

Table S1.1 Completed STROBE checklist

	Item No	Recommendation	Page
Title and abstract	1	(*a*) Indicate the study's design with a commonly used term in the title or the abstract	1-2
		(*b*) Provide in the abstract an informative and balanced summary of what was done and what was found	2
Introduction			
Background/rationale	2	Explain the scientific background and rationale for the investigation being reported	3
Objectives	3	State specific objectives, including any prespecified hypotheses	3/4
Methods			
Study design	4	Present key elements of study design early in the paper	4
Setting	5	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection	4
Participants	6	(*a*) Give the eligibility criteria, and the sources and methods of selection of participants	4/5
Variables	7	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable	4/5/6
Data sources/ measurement	8*	For each variable of interest, give sources of data and details of methods of assessment (measurement). Describe comparability of assessment methods if there is more than one group	4
Bias	9	Describe any efforts to address potential sources of bias	5/6
Study size	10	Explain how the study size was arrived at	5
Quantitative variables	11	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why	6
Statistical methods	12	(*a*) Describe all statistical methods, including those used to control for confounding	5/6
		(*b*) Describe any methods used to examine subgroups and interactions	6
		(*c*) Explain how missing data were addressed	6
		(*d*) If applicable, describe analytical methods taking account of sampling strategy	-
		(*g*) Describe any sensitivity analyses	5/6
Results			
Participants	13*	(a) Report numbers of individuals at each stage of study—eg numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow-up, and analysed	6

		(b) Give reasons for non-participation at each stage	6
		(c) Consider use of a flow diagram	-
Descriptive data	14*	(a) Give characteristics of study participants (eg demographic, clinical, social) and information on exposures and potential confounders	6/7
		(b) Indicate number of participants with missing data for each variable of interest	6, Table S1
Outcome data	15*	Report numbers of outcome events or summary measures	6
Main results	16	(*a*) Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (eg, 95% confidence interval). Make clear which confounders were adjusted for and why they were included	7
		(*b*) Report category boundaries when continuous variables were categorized	-
		(*c*) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period	-
Other analyses	17	Report other analyses done—eg analyses of subgroups and interactions, and sensitivity analyses	7/8
Discussion			
Key results	18	Summarise key results with reference to study objectives	8
Limitations	19	Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias	12/14
Interpretation	20	Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence	12
Generalisability	21	Discuss the generalisability (external validity) of the study results	11
Other information			
Funding	22	Give the source of funding and the role of the funders for the present study and, if applicable, for the original study on which the present article is based	14

*Give information separately for exposed and unexposed groups.

Table S1.2 Sample size of included and total population of Brazil, overall and by quintile of state-level Human Development Index (HDI), 2010

HDI quintile	Included sample			Total Brazil		
	States	*Municipalities*	*Population*	*States*	*Municipalities*	*Population*
1 (lowest)	5	218	3,708,223	5	925	15,013,344
2	5	302	10,003,881	5	960	24,176,668
3	5	479	7,053,599	5	1352	19,370,535
4	4	328	6,846,469	4	898	15,631,978
5 (highest)	4	677	34,955,882	4	1430	53,634,216
Overall	23*	2004	62,568,054	23*	5565	127,826,740

*Some states (3/26) were too small to be analysed separately so were merged with their most similar neighbour for the purpose of this analysis.

Table S1.3 Differences between included and excluded population based on coverage of municipality mortality registration, 2010

	Included		Excluded	
# of municipalities	2004		3561	
Crude cardiovascular mortality rate (per 100,000)	296.3		258.6	
Total population	62,568,054		65,258,686	
Socio-demographics:	*n*	*%*	*n*	*%*
Sex Female	32,899,916	52.6	33,454,284	51.3
Male	29,668,139	47.4	31,804,402	48.7
Age 20-50	42,768,117	68.4	46,051,614	70.6
50-70	15,045,440	24.0	14,729,390	22.6
70+	4,754,497	7.6	4,477,683	6.9
Region Centre-west	1,938,060	3.1	7,415,073	11.4
North	2,529,983	4.0	6,738,691	10.3
North-east	12,063,510	19.3	21,772,305	33.4
South	7,961,369	12.7	11,094,052	17.0
South-east	38,075,133	60.9	18,238,565	27.9
Education <8 years	23,953,156	38.3	30,694,950	47.0
8+ years	38,614,899	61.7	34,563,736	53.0

Table S1.4 Associations between education and cardiovascular mortality stratified by quintile of state-level Human Development Index in Brazil, 2010, including the population all 5565 municipalities (N=127,826,740)

	Age-adjusted rate ratio for having <8 vs 8+ years education (95% CI) by quintile of state HDI					p-value trend by quintile	Change in log rate ratio per 0.1 unit change in state HDI (95% CI)	p-value linear trend
	1 (lowest)	2	3	4	5 (highest)			
Women, all ages								
CVD	3.34 (3.09, 3.61)	3.17 (3.01, 3.34)	2.95 (2.80, 3.11)	3.03 (2.81, 3.27)	2.83 (2.76, 2.91)	0.039	-0.12 (-0.21, -0.02)	0.014
IHD	3.21 (2.82, 3.64)	2.91 (2.65, 3.19)	2.52 (2.30, 2.77)	2.79 (2.56, 3.04)	2.42 (2.32, 2.52)	0.14	-0.10 (-0.22, 0.02)	0.094
Stroke	3.35 (3.02, 3.71)	2.97 (2.71, 3.25)	3.09 (2.78, 3.42)	2.98 (2.74, 3.26)	2.88 (2.75, 3.02)	0.20	-0.09 (-0.22, 0.03)	0.15
Men, all ages								
CVD	2.23 (2.12, 2.35)	2.26 (2.13, 2.38)	1.91 (1.82, 2.00)	2.11 (1.99, 2.25)	2.16 (2.12, 2.21)	0.92	-0.03 (-0.12, 0.05)	0.46
IHD	1.82 (1.66, 2.00)	1.75 (1.63, 1.87)	1.56 (1.45, 1.67)	1.91 (1.79, 2.03)	1.77 (1.72, 1.83)	0.12	0.06 (-0.05, 0.17)	0.31
Stroke	2.41 (2.18, 2.66)	2.47 (2.28, 2.68)	2.40 (2.18, 2.65)	2.50 (2.32, 2.69)	2.60 (2.49, 2.72)	0.49	0.03 (-0.10, 0.15)	0.64
Women, <70								
CVD	3.46 (3.14, 3.81)	3.40 (3.18, 3.64)	3.32 (3.06, 3.60)	3.58 (3.31, 3.88)	3.33 (3.22, 3.46)	0.93	-0.03 (-0.13, 0.07)	0.59
IHD	3.81 (3.20, 4.56)	3.33 (2.92, 3.80)	2.72 (2.37, 3.13)	3.31 (2.90, 3.77)	2.84 (2.69, 3.00)	0.23	-0.10 (-0.24, 0.04)	0.17
Stroke	3.48 (3.01, 4.03)	3.33 (2.94, 3.76)	3.50 (3.06, 4.02)	3.66 (3.18, 4.21)	3.26 (3.04, 3.49)	0.88	-0.03 (-0.15, 0.10)	0.68
Men, <70								
CVD	2.44 (2.30, 2.60)	2.59 (2.44, 2.74)	2.41 (2.24, 2.59)	2.54 (2.39, 2.70)	2.75 (2.68, 2.81)	0.040	0.08 (-0.01, 0.17)	0.075
IHD	1.94 (1.74, 2.18)	1.96 (1.80, 2.15)	1.74 (1.59, 1.90)	2.16 (2.00, 2.33)	2.06 (1.98, 2.14)	0.045	0.09 (-0.03, 0.21)	0.14
Stroke	2.53 (2.22, 2.87)	2.80 (2.52, 3.11)	2.78 (2.49, 3.11)	2.98 (2.67, 3.32)	3.01 (2.84, 3.18)	0.044	0.11 (-0.02, 0.24)	0.084

CI=confidence interval, HDI=Human Development Index, CVD=Cardiovascular disease, IHD=Ischaemic heart disease

Table S1.5 Associations between education and cardiovascular mortality stratified by region of Brazil, 2010

	Age-adjusted rate ratio for having <8 vs 8+ years education (95% CI) by region of Brazil					Change in log rate ratio per 0.1 unit change in region HDI (95% CI)	p-value linear trend
	North-east (lowest HDI)	North	Centre-west	South	South-east (highest HDI)		
Women, all ages							
CVD	3.34 (3.12, 3.57)	3.03 (2.65, 3.48)	3.93 (3.39, 4.56)	2.78 (2.52, 3.07)	2.84 (2.76, 2.93)	-0.16 (-0.28, -0.05)	0.005
IHD	3.13 (2.80, 3.51)	2.40 (1.82, 3.16)	3.83 (2.72, 5.39)	2.48 (2.17, 2.84)	2.41 (2.30, 2.52)	-0.13 (-0.30, 0.05)	0.15
Stroke	3.35 (2.98, 3.76)	2.79 (2.14, 3.64)	3.32 (2.48, 4.46)	3.05 (2.73, 3.41)	2.94 (2.78, 3.11)	-0.11, (-0.30, 0.08)	0.25
Men, all ages							
CVD	2.33 (2.21, 2.45)	2.19 (1.94, 2.46)	2.42 (2.15, 2.71)	2.03 (2.87, 2.21)	2.23 (2.18, 2.28)	-0.06 (-0.15, 0.04)	0.27
IHD	1.81 (1.67, 1.96)	1.55 (1.23, 1.96)	2.23 (1.81, 2.76)	1.85 (1.70, 2.01)	1.77 (1.71, 1.84)	0.09 (-0.07, 0.25)	0.27
Stroke	2.73 (2.46, 3.02)	2.41 (1.89, 3.08)	3.04 (2.34, 3.94)	2.55 (2.29, 2.83)	2.66 (2.53, 2.79)	-0.02 (-0.20, 0.15)	0.79
Women, <70							
CVD	3.68 (3.38, 4.00)	3.04 (2.48, 3.72)	3.95 (3.25, 4.80)	3.31 (2.97, 3.69)	3.38 (3.25, 3.52)	-0.09 (-0.22, 0.04)	0.20
IHD	3.75 (3.17, 4.44)	2.89 (2.02, 4.15)	4.01 (2.84, 5.67)	2.77 (2.34, 3.28)	2.83 (2.66, 3.02)	-0.16 (-0.37, 0.05)	0.13
Stroke	3.96 (3.36, 4.68)	2.98 (2.08, 4.27)	3.51 (2.46, 5.00)	3.42 (2.85, 4.09)	3.36 (3.13, 3.62)	-0.09 (-0.28, 0.11)	0.40
Men, <70							
CVD	2.71 (2.54, 2.89)	2.41 (2.03, 2.87)	2.61 (2.20, 3.11)	2.44 (2.26, 2.64)	2.92 (2.83, 3.00)	0.05 (-0.07, 0.16)	0.44
IHD	2.11 (1.90, 2.34)	1.64 (1.28, 2.11)	2.21 (1.74, 2.81)	2.10 (1.88, 2.35)	2.08 (1.99, 2.18)	0.09 (-0.09, 0.28)	0.31
Stroke	3.07 (2.60, 3.62)	2.74 (2.08, 3.63)	3.72 (2.69, 5.16)	3.11 (2.63, 3.67)	3.17 (2.97, 3.38)	0.07 (-0.14, 0.27)	0.52

CI=confidence interval, HDI=Human Development Index, CVD=Cardiovascular disease, IHD=Ischaemic heart disease,

Table S1.6 Age-standardised cardiovascular mortality rates per 100,000 population by years of education and quintile of state-level Human Development Index, Brazil, 2010

Quintile of state HDI	Cardiovascular mortality rate (per 100,000 population)					
	0-7 years of education	Lower CI	Upper CI	8+ years of education	Lower CI	Upper CI
Females						
1 (lowest HDI)	610.6	562.7	658.6	170.5	146.9	194.1
2	568.6	527.9	609.3	180.4	160.3	200.5
3	563.1	519.1	607.2	180.4	154.3	206.4
4	613.7	563.1	664.3	186.1	161.8	210.4
5 (highest HDI)	637.8	591.1	684.4	221.0	196.9	245.1
Males						
1 (lowest HDI)	835.4	771.0	899.8	325.5	282.9	368.1
2	785.1	729.3	840.9	350.3	312.4	388.2
3	772.5	712.8	832.1	361.3	311.0	411.7
4	841.4	772.5	910.3	359.0	313.5	404.5
5 (highest HDI)	973.3	902.2	1044.4	421.3	375.7	467.0

CI=confidence interval, HDI=Human Development Index
Rates standardised to the age distribution of the overall study population, and calculated using Stata's margins command.

Table S1.7 Age-adjusted cardiovascular mortality rate differences per 100,000 population for having <8 vs 8+ years of education by quintile of state-level Human Development Index, Brazil, 2010

	Age-adjusted rate difference (per 100,000) for having <8 vs 8+ years education (95% CI) by quintile of state HDI				
	1 (lowest)	2	3	4	5 (highest)
Women, all ages					
CVD	440.2 (399.0, 481.3)	388.2 (355.7, 420.7)	382.8 (343.6, 422.0)	427.6 (386.5, 468.7)	416.8 (381.2, 452.4)
IHD	97.1 (70.9, 123.3)	64.6 (54.8, 74.3)	72.0 (63.2, 80.8)	126.4 (91.1, 161.6)	96.7 (88.4, 105.0)
Stroke	159.5 (133.8, 185.3)	116.1 (97.7, 134.4)	101.7 (81.7, 121.6)	123.6 (101.4, 145.7)	138.4 (125.0, 151.8)
Men, all ages					
CVD	509.9 (455.2, 564.6)	434.8 (391.3, 478.3)	411.2 (355.1, 467.2)	482.4 (427.7, 537.2)	552.0 (499.1, 604.9)
IHD	102.8 (64.3, 141.4)	47.1 (28.8, 65.3)	81.2 (66.4, 96.0)	161.4 (108.3, 214.5)	133.6 (117.3, 150.0)
Stroke	172.5 (140.1, 204.9)	137.6 (113.5, 161.7)	131.4 (103.4, 159.5)	162.3 (131.3, 193.2)	190.7 (170.2, 211.1)
Women, <70					
CVD	133.9 (109.8, 157.9)	114.4 (94.5, 134.4)	110.9 (90.2, 131.7)	132.6 (108.0, 157.2)	122.7 (113.6, 131.7)
IHD	39.4 (28.5, 50.4)	27.8 (22.4, 33.3)	27.5 (22.9, 32.1)	41.0 (35.4, 46.7)	34.9 (30.5, 39.3)
Stroke	44.2 (33.9, 54.6)	38.3 (30.5, 46.1)	36.0 (31.0, 41.0)	41.5 (36.0, 47.1)	39.2 (34.2, 44.2)
Men, <70					
CVD	180.1 (145.0, 215.2)	163.2 (132.2, 194.2)	165.8 (132.0, 199.6)	191.8 (152.9, 230.7)	219.8 (202.6, 237.1)
IHD	51.8 (32.5, 71.0)	30.4 (19.9, 40.8)	45.5 (37.6, 53.5)	61.2 (51.5, 70.9)	66.7 (56.1, 77.3)
Stroke	48.1 (35.6, 60.7)	44.8 (35.2, 54.4)	54.5 (47.6, 61.3)	58.5 (50.9, 66.0)	60.3 (52.6, 68.0)

CI=confidence interval, HDI=Human Development Index, CVD=Cardiovascular disease, IHD=Ischaemic heart disease
Adjusted rate differences calculated using Stata's margins command.

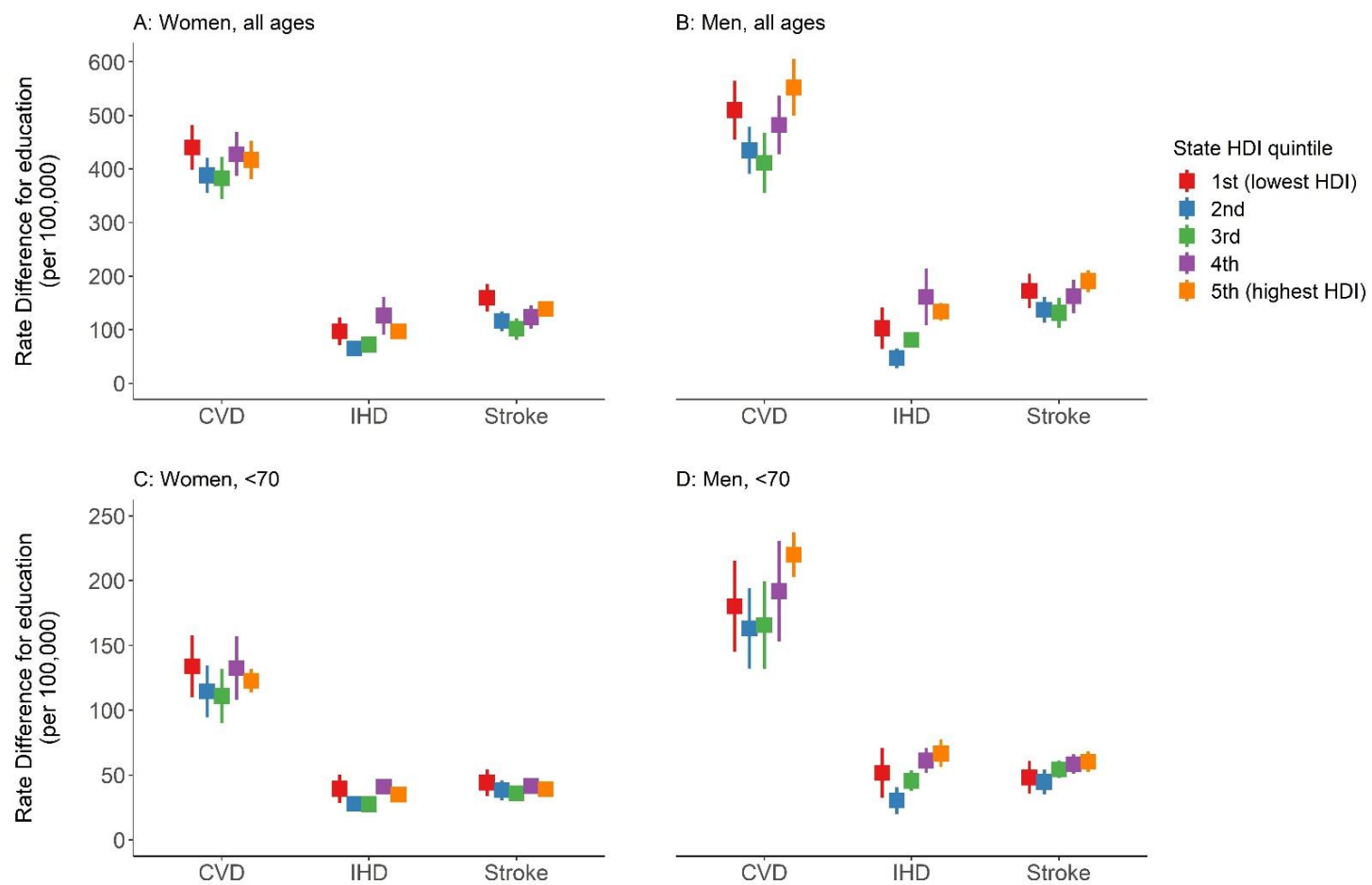**Figure S1.1 Graphs of the age-adjusted cardiovascular mortality rate differences per 100,000 population for having <8 vs 8+ years of education by quintile of state-level Human Development Index, Brazil, 2010**

Appendix 2: Supplemental data for chapter 3

Table S2.1 Completed PRISMA 2020 checklist

Section and Topic	Item #	Checklist item	Location in article
TITLE	1	Identify the report as a systematic review.	Title
ABSTRACT	2	See the PRISMA 2020 for Abstracts checklist (Table 2).	
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of existing knowledge.	Intro p1-2
Objectives	4	Provide an explicit statement of the objective(s) or question(s) the review addresses.	Intro p2
METHODS			
Eligibility criteria	5	Specify the inclusion and exclusion criteria for the review and how studies were grouped for the syntheses.	Meth p2-6
Information sources	6	Specify all databases, registers, websites, organisations, reference lists and other sources searched or consulted to identify studies. Specify the date when each source was last searched or consulted.	Meth p5
Search strategy	7	Present the full search strategies for all databases, registers and websites, including any filters and limits used.	Annex 2
Selection process	8	Specify the methods used to decide whether a study met the inclusion criteria of the review, including how many reviewers screened each record and each report retrieved, whether they worked independently, and if applicable, details of automation tools used in the process.	Meth p6
Data collection process	9	Specify the methods used to collect data from reports, including how many reviewers collected data from each report, whether they worked independently, any processes for obtaining or confirming data from study investigators, and if applicable, details of automation tools used in the process.	Meth p6
Data items	10a	List and define all outcomes for which data were sought. Specify whether all results that were compatible with each outcome domain in each study were sought (e.g. for all measures, time points, analyses), and if not, the methods used to decide which results to collect.	Meth p3,6, Table 1
	10b	List and define all other variables for which data were sought (e.g. participant and intervention characteristics, funding sources). Describe any assumptions made about any missing or unclear information.	Meth p6, Annex 3
Study risk of bias assessment	11	Specify the methods used to assess risk of bias in the included studies, including details of the tool(s) used, how many reviewers assessed each study and whether they worked independently, and if applicable, details of automation tools used in the process.	Meth p7
Effect measures	12	Specify for each outcome the effect measure(s) (e.g. risk ratio, mean difference) used in the synthesis or presentation of results.	NA
Synthesis methods	13a	Describe the processes used to decide which studies were eligible for each synthesis.	Meth p6
	13b	Describe any methods required to prepare the data for presentation or synthesis, such as handling of missing summary statistics, or data conversions.	NA
	13c	Describe any methods used to tabulate or visually display results of individual studies and syntheses.	Meth p6

	13d	Describe any methods used to synthesize results and provide a rationale for the choice(s). If meta-analysis was performed, describe the model(s), method(s) to identify the presence and extent of statistical heterogeneity, and software package(s) used.	Meth p6
	13e	Describe any methods used to explore possible causes of heterogeneity among study results.	NA
	13f	Describe any sensitivity analyses conducted to assess robustness of the synthesized results.	NA
Reporting bias assessment	14	Describe any methods used to assess risk of bias due to missing results in a synthesis (arising from reporting biases).	Meth p7
Certainty assessment	15	Describe any methods used to assess certainty (or confidence) in the body of evidence for an outcome.	NA
RESULTS			
Study selection	16a	Describe the results of the search and selection process, from the number of records identified in the search to the number of studies included in the review, ideally using a flow diagram (see Figure 1).	Results p1 Figure 1
	16b	Cite studies that met many but not all inclusion criteria ('near-misses') and explain why they were excluded.	NA
Study characteristics	17	Cite each included study and present its characteristics.	Result p2-8, Table 2
Risk of bias in studies	18	Present assessments of risk of bias for each included study.	Figure 2
Results of individual studies	19	For all outcomes, present, for each study: (a) summary statistics for each group (where appropriate) and (b) an effect estimate and its precision (e.g. confidence/credible interval), ideally using structured tables or plots.	Tables 2 & 3, Annex 3
Results of syntheses	20a	For each synthesis, briefly summarise the characteristics and risk of bias among contributing studies.	Result p9
	20b	Present results of all statistical syntheses conducted. If meta-analysis was done, present for each the summary estimate and its precision (e.g. confidence/credible interval) and measures of statistical heterogeneity. If comparing groups, describe the direction of the effect)	Result p4-8, Table 3
	20c	Present results of all investigations of possible causes of heterogeneity among study results.	NA
	20d	Present results of all sensitivity analyses conducted to assess the robustness of the synthesized results.	NA
Reporting biases	21	Present assessments of risk of bias due to missing results (arising from reporting biases) for each synthesis assessed.	NA
Certainty of evidence	22	Present assessments of certainty (or confidence) in the body of evidence for each outcome assessed.	NA
DISCUSSION	23a	Provide a general interpretation of the results in the context of other evidence.	Discuss p1-3
	23b	Discuss any limitations of the evidence included in the review.	Discuss p4
	23c	Discuss any limitations of the review processes used.	Discuss p5
	23d	Discuss implications of the results for practice, policy, and future research.	Discuss p6
OTHER INFORMATION			
Registration and protocol	24a	Provide registration information for the review, including register name and registration number, or state that the review was not registered.	Method p1

	24b	Indicate where the review protocol can be accessed, or state that a protocol was not prepared.	Method p1
	24c	Describe and explain any amendments to information provided at registration or in the protocol.	NA
Support	25	Describe sources of financial or non-financial support for the review, and the role of the funders or sponsors in the review.	Funding
Competing interests	26	Declare any competing interests of review authors.	Interests
Availability of data, code and other materials	27	Report which of the following are publicly available and where they can be found: template data collection forms; data extracted from included studies; data used for all analyses; analytic code; any other materials used in the review.	Data availability

Table S1 Cont. PRISMA 2020 for Abstracts checklist

Section and Topic	Item #	Checklist item	Location in abstract
TITLE			Title
Title	1	Identify the report as a systematic review.	
BACKGROUND		Provide an explicit statement of the main objective(s) or question(s) the review addresses.	Methods
Objectives	2		
METHODS			Methods
Eligibility criteria	3	Specify the inclusion and exclusion criteria for the review.	
Information sources	4	Specify the information sources (e.g. databases, registers) used to identify studies and the date when each was last searched.	Methods
Risk of bias	5	Specify the methods used to assess risk of bias in the included studies.	Methods
Synthesis of results	6	Specify the methods used to present and synthesize results.	Methods
RESULTS			Results
Included studies	7	Give the total number of included studies and participants and summarise relevant characteristics of studies.	
Synthesis of results	8	Present results for main outcomes, preferably indicating the number of included studies and participants for each. If meta-analysis was done, report the summary estimate and confidence/credible interval. If comparing groups, indicate the direction of the effect (i.e. which group is favoured).	Results
DISCUSSION			Results
Limitations of evidence	9	Provide a brief summary of the limitations of the evidence included in the review (e.g. study risk of bias, inconsistency and imprecision).	
Interpretation	10	Provide a general interpretation of the results and important implications.	Conclusion
OTHER			Funding statement
Funding	11	Specify the primary source of funding for the review.	
Registration	12	Provide the register name and registration number.	Methods

Table S2.2 Search strategy for Ovid databases

Search executed on 19/09/2020		
Domain	**No.**	**Terms**
Socioeconomic position in childhood	1	((early OR early-life OR child OR childhood OR children* OR adolescents OR adolescent OR adolescence OR fetal OR foetal OR in utero OR uterine OR pregnancy OR pregnant OR prenatal OR perinatal OR neonatal OR postnatal OR gestation* OR infancy OR infant* OR birth OR births OR born OR lifecourse OR life-course OR life course OR lifespan or intergenerational or inter-generational or transgenerational or trans-generational) adj4 (socio-economic* or socioeconomic* or socio-demographic* or sociodemographic* or social class or social status or social position or social circumstances or economic status or poverty or deprivation or deprived or adverse or adversity or disadvantage* or housing conditions or living conditions or material circumstances or material conditions or household assets or household income or standard of living)).tw
	2	((parent* OR mother* or father* or maternal or paternal OR grandparent* OR grandfather* OR grandmother*) adj3 (socio-economic* or socioeconomic* or socio-demographic* or sociodemographic* or social class or social status or social position or social circumstances or education* or schooling or occupation* or income* or earning* or wealth* or asset* or possession*)).tw
	3	((early or childhood) adj2 (experience* OR condition* OR environment* OR circumstance* OR exposure*)).tw
	4	(social mobility).tw
	5	1 OR 2 OR 3 OR 4
Cardiovascular disease and its risk factors	6	(Cardiovascular OR cardio-vascular OR CVD OR heart disease* OR cardiometabolic OR cardio-metabolic OR stroke OR cerebrovasc* OR circulatory disease OR myocardial infarction OR arteriosclero* OR atherosclero* OR CIMT OR (carotid adj2 (intima-media OR intima media OR IMT or plaque)) OR blood pressure or hypertens* or pulse wave velocity or augmentation index or arterial stiffness or arterial stiffening or metabolic syndrome or diabetes or fasting glucose or insulin or cholesterol or lipid profile or lipids or triglyceride*).tw
Low- and middle-income countries	7	(transitional countr* or global south or lmic or lmics or lamic or lamics or lami countr* or third world or ((developing or less* developed or least developed or under developed or underdeveloped or middle income or low income or low-middle income or lower-middle income or upper-middle income) adj3 (economy or economies or country or countries or population or populations)) or Africa* or asia* or latin America* or south America* or central america* or middle east* or eastern Mediterranean or eastern Europe* or pacific or Micronesia).tw
	8	(Central African Republic or Ubangi-Shari or Chad or Cameroon* or congo* or Gabon* or zaire or Malawi* or Nyasaland or Mozambi* or Portuguese East Africa or Zimbabwe* or Rhodesia* or Lesotho or Basutoland or Swazi* or Zambia* or Northern Rhodesia* or Angola* or Botswana* or Bechuanaland or Kalahari or Namibia* or South Africa* or sao tome or Benin or Dahomey or Burkina Faso or Burkina Fasso or Upper Volta or Gambia* or Ghan* or Gold Coast or Guinea-Bissau or Portuguese Guinea or Cote d'Ivoire or Ivory Coast or Liberia* or Mali or malian or Mauritania* or Niger or Nigeria* or

		Senegal* or Sierra Leone* or Togo* or Guinea* or Cape Verde* or Mexic* or Djibouti or Burundi* or Ethiopia* or Kenya* or Rwanda* or Ruanda* or Somali* or Sudan* or Tanzania* or Uganda* or Eritrea* or Egypt* or Algeria* or Libya* or Morocc* or Tunisia* or Bangladesh* or Bhutan* or Nepal* or india* or Pakistan* or Sri Lanka* or Syria* or gaza* or Afghan* or Iran* or Iraq* or jordan* or Leban* or yemen* or Maldiv* or Madagasca* or Malagasy Republic or Seychelles or comoros or comores or Mauriti* or Agalega Islands or Armenia* or georgia* or Azerbaijan* or Haiti or haitian or Cuba* or Dominica* or Antigua or Barbuda or Jamaica* or Grenad* or St Lucia* or Saint Lucia* or Grenadines or Belize or Costa Rica* or El Salvador* or Guatemala* or Hondura* or Nicaragua* or Panama* or Bolivia* or Argentin* or Brazil* or Chile* or Colombia* or Ecuador* or Guyana* or Paraguay or Peru* or Surinam* or Uruguay or Venezuela* or kyrgyzstan or kyrgyz or kirghizia or kirghiz or tajikistan or tadzhik or tadzhikistan or tajikistan or Kazakhstan or kazakh or turk* or Uzbekistan or Albania* or Jugoslavija* or Yugoslavia* or serbo-croat* or macedonia* or sloven* or kosovo or Moldova* or Ukrain* or Bulgaria* or belarus or byelarus or belorussia or bosnia* or Montenegro or Romania* or russia* or ussr or soviet or cccp or serbia* or Latvia* or Lithuania* or korea* or mongolia* or china or chinese or fiji* or Papua New Guinea or Vanuatu or Solomon Islands or Timor-Leste or Melanesia* or Micronesia* or Kiribati or Palau or Belau or Pelew or samoa* or tonga* or tuvalu or ellice islands or cambodia* or Kampuchea or myanmar or burma or burmese or indonesia* or laos or lao democratic republic or lao people* or marshall island* or Malaysia* or Philippin* or filipin* or thai* or Vietnam* or tuvalu or ellice islands).tw
	9	7 OR 8
Final search	10	5 AND 6 AND 9

Table S2.3 Extracted results of included articles (N=29)

Author, year	Exposure	Outcome	Measure of effect	Model 1: Adjusted for age & sex (or minimally adjusted)	Model 2: Adjusted for adult socioeconomic position	Adjustments
Keetile, 2020	Composite index of childhood SEP	Self-reported diabetes	Odds ratio	Low: 1.77 Middle: 1.96 High: 1.00	Low 2.34 Middle 2.31 High1.00	Model 1 is unadjusted. Model 2 is adjusted for age, sex, education, residence, work status, and current wealth status.
Keetile, 2020	Composite index of childhood SEP	Self-reported hypertension	Odds ratio	Low: 0.41*** Middle: 0.79 High: 1.00	Low: 1.53*** Middle: 1.07 High: 1.00	
Camelo, 2015	Maternal education	CIMT - males	Linear regression beta coefficient	Maternal educ >11: ref Maternal educ 8-10: -0.000 (-0.018, 0.017) Maternal educ 1-7: 0.004 (-0.011, 0.019) Maternal educ 0: -0.005 (-0.025, 0.015)	Not shown	Model 1 adjusted for age and race. Model 2 also adjusted for first and current occupation.
Camelo, 2015	Maternal education	CIMT - females	Linear regression beta coefficient	Maternal educ >11: ref Maternal educ 8-10: 0.004 (-0.009, 0.017) Maternal educ 1-7: 0.003 (-0.008, 0.014) Maternal educ 0: 0.024 (0.009, 0.040)	Maternal educ >11: ref Maternal educ 8-10: -0.002 (-0.015, 0.011) Maternal educ 1-7: -0.006 (-0.018, 0.005) Maternal educ 0: 0.008 (-0.009, 0.025)	
Guimaraes, 2016	Trajectory between parental and own occupational social class (index based on education, occupation and income)	CIMT	Linear regression beta coefficient	-	Stable high: 0 (ref) Upward: 0.006 (0.26) Downward: 0.011 (0.04) Stable low: 0.018 (0.004)	Age, sex, race, centre, marital status, family history of CHD
Coelho, 2019	Maternal education	carotid-femoral pulse wave velocity - whites	Linear regression beta coefficient	high school: 0 (ref) elementary complete: 0.02 (-0.08; 0.12) elementary incomplete:	high school: 0 (ref) elementary complete: -0.06 (-0.15; 0.03) elementary incomplete: 0.05	Model 1 adjusted for age and sex. Model 2 adjusted for own education, smoking, physical activity,

				0.15 (0.06;0.22)** No school: 0.27 (0.14;0.41)***	(-0.03; 0.13) No school: 0.01 (-0.12; 0.15)	body weight, height, arterial pressure, heart rate, use of anti-hypertensives, diabetes
Coelho, 2019	Maternal education	carotid-femoral pulse wave velocity - browns	Linear regression beta coefficient	high school: 0 (ref) elementary complete: 0.04 (-0.13; 0.21) elementary incomplete: 0.33 (0.19;0.48)*** No school: 0.53 (0.36;0.70)***	high school: 0 (ref) elementary complete: -0.09 (-0.24; 0.06) elementary incomplete: 0.08 (-0.05; 0.21) No school: 0.18 (0.01;0.34)*	
Coelho, 2019	Maternal education	carotid-femoral pulse wave velocity - blacks	Linear regression beta coefficient	high school: 0 (ref) elementary complete: 0.24 (-0.04; 0.53) elementary incomplete: 0.40 (0.15;0.66)** No school: 0.56 (0.28;0.85)***	high school: 0 (ref) elementary complete: 0.24 (-0.01; 0.49) elementary incomplete: 0.35 (0.13;0.57)** No school: 0.44 (0.18;0.70)**	
Camelo, 2016	Trajectory based on parents' and own education	Diabetes - men	Odds ratio	-	High-stable: 1 (ref) Upwards: 1.11 (0.87-1.41) Downward: 1.58 (1.20-2.08)** low-stable: 1.80 (1.47-2.21)***	Age and race
Camelo, 2016	Trajectory based on parents' and own education	Diabetes - women	Odds ratio	-	High-stable: 1 (ref) Upwards: 1.15 (0.89, 1.47) Downward: 1.53 (1.14, 2.06)** low-stable: 1.71 (1.36, 2.15)***	
Camelo, 2016	Trajectory based on parents' and own occupation	Diabetes - men	Odds ratio	-	High-stable: 1 (ref) Upwards: 1.29 (1.03-1.62)* Downward: 1.59 (1.14-2.20)** low-stable: 2.10 (1.70-2.60)***	

Camelo, 2016	Trajectory based on parents' and own occupation	Diabetes - women	Odds ratio	-	High-stable: 1 (ref) Upwards: 1.09 (0.85, 1.41) Downward: 1.28 (0.93, 1.75) low-stable: 1.64 (1.30, 2.06)***	
De Sousa Andrade, 2017	Maternal education	CVD risk score (arithmetic mean ratio; how much great CVD risk score is compared to reference category)	Linear regression beta coefficient	>11 years: 1 (ref) 8-10 years: 1.36 (1.26–1.46)*** 1-7 years: 1.43 (1.33–1.53)*** 0 years: 1.88 (1.73–2.03)***	>11 years: 1 (ref) 8-10 years: 1.27 (1.16–1.39)*** 1-7 years: 1.26 (1.16–1.36)*** 0 years: 1.40 (1.27–1.54) ***	Model 1 is unadjusted. Model 2 is adjusted for leg length, social class of first occupation and education
Lopez, 2017	Maternal education (high vs low (ref))	SBP	Linear regression beta coefficient	-1.946 (-2.561, -1.332)	-0.752 (-1.377, -0.126)	Model 1 is adjusted for age, sex, ethnicity and use of antihypertensive medication. Model 2 is also adjusted for own education, smoking and alcohol status, physical activity, waist circumference and change of weight since when 20y
Nishida, 2020	Maternal education (below/above median for age)	Hypertension	Odds ratio	p=0.863	Low: 1 (ref) High: 1.04 (0.78, 1.39), p=0.775	Model 1 only presented stratified proportions. Model 2 is from logistic regression models adjusted for adult income tertile.
Nishida, 2020	Paternal education (below/above median for age)	Hypertension	Odds ratio	p=0.888	Low: 1 (ref) High: 1.09 (0.82, 1.45), p=0.564	
Horta, 2008	Maternal education	SBP - men	Linear regression beta coefficient	12+ years: 0 (ref) 9-11 years: 0.54 (−1.92;3.00) 5-8 years: −0.85 (−2.74;1.03) 0-4 years: −0.15 (−2.11;1.80) p value: 0.49	12+ years: 0 (ref) 9-11 years: 0.29 (−2.37;2.95) 5-8 years: −1.23 (−3.56;1.10) 0-4 years: −0.64 (−3.15;1.87) p value: 0.45	Model 1 is unadjusted. Model 2 is adjusted for skin colour and family income at birth

				Model 1	Model 2	
Horta, 2008	Maternal education	SBP - women	Linear regression beta coefficient	12+ years: 0 (ref) 9-11 years: −0.41 (−2.66;1.84) 5-8 years: −0.72 (−2.46;1.01) 0-4 years: −0.92 (−2.71;0.87) p value: 0.30	12+ years: 0 (ref) 9-11 years: −1.24 (−3.64;1.16) 5-8 years: −1.96 (−4.13;0.20) 0-4 years: −2.40 (−4.73;-0.07) p value: 0.05	
Horta, 2008	Maternal education	DBP - men	Linear regression beta coefficient	12+ years: 0 (ref) 9-11 years: 0.21 (−1.79;2.20) 5-8 years: −0.68 (−2.21;0.85) 0-4 years: −0.30 (−1.88;1.29) p value: 0.57	12+ years: 0 (ref) 9-11 years: 0.27 (−1.89;2.43) 5-8 years: −0.65 (−2.54;1.25) 0-4 years: −0.40 (−2.44;1.64) p value: 0.59	
Horta, 2008	Maternal education	DBP - women	Linear regression beta coefficient	12+ years: 0 (ref) 9-11 years: −0.23 (−2.09;1.63) 5-8 years: −0.94 (−2.38;0.50) 0-4 years: −1.53 (−3.01;-0.04) p value: 0.02	12+ years: 0 (ref) 9-11 years: −0.67 (−2.66;1.32) 5-8 years: −1.46 (−3.26;0.34) 0-4 years: −2.11 (−4.05;-0.18) p value: 0.02	
Horta, 2008	Family income at birth (minimum wages)	SBP - men	Linear regression beta coefficient	>10: 0 (ref) 6.1-10: 1.42 (−2.13;4.98) 3.1-6: 0.21 (−2.68;3.11) 1.1-3: 0.65 (−2.03;3.34) <1: 0.14 (−2.74;3.02) p value: 0.87	>10: 0 (ref) 6.1-10: 1.51 (−2.08;5.09) 3.1-6: 0.59 (−2.56;3.75) 1.1-3: 0.98 (−2.20;4.16) <1: 0.18 (−3.28;3.63) p value: 0.80	Model 1 is unadjusted. Model 2 is adjusted for skin colour and maternal education
Horta, 2008	Family income at birth (minimum wages)	SBP - women	Linear regression beta coefficient	>10: 0 (ref) 6.1-10: −0.25 (−3.53;3.03) 3.1-6: 0.52 (−2.14;3.19) 1.1-3: 0.70 (−1.76;3.15) <1: 0.49 (−2.15;3.13) p value: 0.55	>10: 0 (ref) 6.1-10:0.21 (−3.12;3.54) 3.1-6: 1.44 (−1.46;4.35) 1.1-3: 2.03 (−0.93;4.99) <1: 1.82 (−1.41;5.04) p value: 0.36	

Horta, 2008	Family income at birth (minimum wages)	DBP - men	Linear regression beta coefficient	>10: 0 (ref) 6.1-10: 2.89 (0.02;5.77) 3.1-6: 0.31 (−2.03;2.66) 1.1-3: 0.59 (−1.59;2.76) <1: 0.90 (−1.43;3.23) p value: 0.55	>10: 0 (ref) 6.1-10: 2.93 (0.02;5.83) 3.1-6: 0.52 (−2.04;3.08) 1.1-3: 0.85 (−1.73;3.43) <1: 1.07 (−1.73;3.88) p value: 0.27	
Horta, 2008	Family income at birth (minimum wages)	DBP - women	Linear regression beta coefficient	>10: 0 (ref) 6.1-10: −0.41 (−3.13;2.30) 3.1-6: 0.88 (−1.33;3.08) 1.1-3: −0.29 (−2.32;1.75) <1: −0.08 (−2.27;2.11) p value: 0.49	>10: 0 (ref) 6.1-10: −0.04 (−2.80;2.72) 3.1-6: 1.68 (−0.72;4.09) 1.1-3: 1.02 (−1.43;3.48) <1: 1.45 (−1.23;4.13) p value: 0.36	
Figueiredo, 2007	Household income tertile at birth	Triglycerides - men	Linear regression beta coefficient	High: 0 (ref) Intermediate: 2.33 (-10.31, 14.99) Low: -2.06 (-15.00, 10.88) p trend: NS	High: 0 (ref) Intermediate: 6.95 (-6.93, 20.83) Low: 5.46 (-9.30, 20.22) p trend: NS	Model 1 is unadjusted. Model 2 is adjusted for income tertile in adulthood.
Figueiredo, 2007	Household income tertile at birth	Triglycerides - women	Linear regression beta coefficient	High: 0 (ref) Intermediate: -4.70 (-12.87, 3.47) Low: -4.81 (-12.75, 3.13) p trend: NS	High: 0 (ref) Intermediate: -5.19 (-14.21, 3.82) Low: -2.91 (-12.43, 6.61) p trend: NS	
Figueiredo, 2007	Household income tertile at birth	Total cholesterol - men	Linear regression beta coefficient	High: 0 (ref) Intermediate: -5.52 (-11.81, 0.78) Low: -11.85 (-18.29, -5.41) p trend: <0.01	High: 0 (ref) Intermediate: -2.69 (-9.50, 4.11) Low: -8.68 (-15.92, -1.44) p trend: NS	
Figueiredo, 2007	Household income tertile at birth	Total cholesterol - women	Linear regression beta coefficient	High: 0 (ref) Intermediate: -3.76 (-9.58, 2.05) Low: -4.25 (-9.90, 1.40) p trend: NS	High: 0 (ref) Intermediate: -3.00 (-9.29, 3.29) Low: -1.38 (-8.02, 5.25) p trend: NS	
Figueiredo, 2007	Household income tertile at birth	LDL - men	Linear regression beta coefficient	High: 0 (ref) Intermediate: -3.02 (-8.46, 2.43)	High: 0 (ref) Intermediate: -1.22 (-7.10, 4.66)	

				Low: -10.26 (-15.83, -4.70) p trend: <0.01	Low: -9.23 (-15.49, -2.97) p trend: <0.01	
Figueiredo, 2007	Household income tertile at birth	LDL - women	Linear regression beta coefficient	High: 0 (ref) Intermediate: 2.02 (-2.89, 6.94) Low: 2.15 (-2.62, 6.93) p trend: NS	High: 0 (ref) Intermediate: 1.03 (-4.27, 6.32) Low: 1.68 (-3.91, 7.27) p trend: NS	
Figueiredo, 2007	Household income tertile at birth	HDL - men	Linear regression beta coefficient	High: 0 (ref) Intermediate: -2.64 (-4.38, -0.90) Low: -0.92 (-2.69, 0.86) p trend: <0.01	High: 0 (ref) Intermediate: -2.42 (-4.29, -0.56) Low: -0.21 (-2.20, 1.77) p trend: <0.05	
Figueiredo, 2007	Household income tertile at birth	HDL - women	Linear regression beta coefficient	High: 0 (ref) Intermediate: -4.80 (-7.04, -2.54) Low: -5.52 (-7.70, -3.35) p trend: <0.001	High: 0 (ref) Intermediate: -2.94 (-5.33, -0.55) Low: -2.59 (-5.11, -0.06) p trend: <0.05	
Elwell-Sutton, 2011	Household assets in childhood (low vs high base)	Metabolic syndrome - all	Odds ratio	1.16 (1.07, 1.26)*	1.06 (0.98, 1.16)	Model 1 is adjusted for age and sex. Model 2 includes 3 other SEP indicators (education, longest occupation, income)
Elwell-Sutton, 2011	Household assets in childhood (low vs high base)	Metabolic syndrome - males	Odds ratio	0.89 (0.74, 1.07)	0.92 (0.76, 1.11)	
Elwell-Sutton, 2011	Household assets in childhood (low vs high base)	Metabolic syndrome - females	Odds ratio	1.23 (1.12, 1.34)*	1.09 (0.996, 1.20)	
Schooling, 2008	Household assets in childhood	Metabolic syndrome - males	Odds ratio	0 items: 1 1 or 2 items: 1.09 (0.79, 1.52) 3 items: 1.21 (0.85, 1.73) p trend: 0.27	0 items: 1 1 or 2 items: 1.04 (0.75, 1.46) 3 items: 1.13 (0.79, 1.62) p trend: 0.52	Model 1 adjusted for age. Model 2 adjusted for height, smoking, alcohol drinking, physical activity, education and occupation.
Schooling, 2008	Household assets in childhood	Metabolic syndrome - females	Odds ratio	0 items: 1 1 or 2 items: 0.76 (0.64, 0.89)	0 items: 1 1 or 2 items: 0.82 (0.70, 0.97)	

					3 items: 0.72 (0.60, 0.86) p trend: <0.001	3 items: 0.81 (0.67, 0.98) p trend: 0.01	
Schooling, 2008	Household assets in childhood	SBP - males	Linear regression beta coefficient	p trend: <0.01 (inverse)	0 items: 0 1 or 2 items: 1.17, -0.94 to 3.28 3 items: -0.69, -2.87 to 1.48 p trend: 0.83	Model 1 is unadjusted (means not effect sizes given). Model 2 is adjusted for height, smoking, alcohol drinking, physical activity, education and occupation.
Schooling, 2008	Household assets in childhood	SBP - females	Linear regression beta coefficient	p trend: <0.01 (inverse)	0 items: 0 1 or 2 items: -1.13, -2.34 to 0.08 3 items: -0.71, -2.01 to 0.60 p trend: 0.15	
Schooling, 2008	Household assets in childhood	DBP - males	Linear regression beta coefficient	p trend: 0.01 (direct)	0 items: 0 1 or 2 items: 0.14, -1.00 to 1.28 3 items: 0.82, -0.39 to 2.04 p trend: 0.21	
Schooling, 2008	Household assets in childhood	DBP - females	Linear regression beta coefficient	p trend: 0.82	0 items: 0 1 or 2 items: -0.52, -1.17 to 0.13 3 items: 0.05, -0.63 to 0.74 p trend: 0.79	
Schooling, 2008	Household assets in childhood	Fasting glucose - males	Linear regression beta coefficient	p trend: 0.71	0 items: 0 1 or 2 items: 0.01, -0.14 to 0.16 3 items: 0.04, -0.12 to 0.20 p trend: 0.63	
Schooling, 2008	Household assets in childhood	Fasting glucose - females	Linear regression beta coefficient	p trend: <0.01 (inverse)	0 items: 0 1 or 2 items: -0.04 (-0.14, 0.06) 3 items: -0.08 (-0.18, 0.02) p trend: 0.11	
Schooling, 2008	Household assets in childhood	HDL - males	Linear regression beta coefficient	p trend: <0.01 (inverse)	0 items: 0 1 or 2 items: -0.05, -0.09 to -0.01	

					3 items: -0.07, -0.12 to -0.03 p trend: <0.01	
Schooling, 2008	Household assets in childhood	HDL - females	Linear regression beta coefficient	p trend: 0.58	0 items: 0 1 or 2 items: -0.01, -0.04 to 0.02 3 items: -0.01, -0.04 to 0.02 p trend: 0.38	
Schooling, 2008	Household assets in childhood	Triglycerides - males	Linear regression beta coefficient	p trend: 0.01 (direct)	0 items: 0 1 or 2 items: 0.01, -0.12 to 0.14 3 items: 0.08, -0.07 to 0.22 p trend: 0.34	
Schooling, 2008	Household assets in childhood	Triglycerides - females	Linear regression beta coefficient	p trend: 0.35	0 items: 0 1 or 2 items: -0.03, -0.11 to 0.05 3 items: 0.02, -0.07 to 0.11 p trend: 0.77	
Fan, 2010	Parents' education	Prevalent CHD	Odds ratio	-	≤ Primary school (ref.): 1 Secondary school: 0.629, 0.276–1.431 ≥ College: 1.074, 0.574–2.011	Maternal age, birth times, pregnancy times, and gestational duration, birth-weight/birth length, placental weight, milk consumption, regular physical exercise in the 5-year period preceding the study, diabetes, obesity, hypertension, and dyslipidaemia, age, gender, ratio of birth-weight to birth length
Fan, 2010	Father's occupation	Prevalent CHD	Odds ratio	-	Worker (ref): 1 Manager: 1.098, 0.473–2.547 Academic: 0.782, 0.345–1.773 Servant: 1.010, 0.440–2.319	
McEniry, 2019	Subjective poor SEP in childhood (poor vs not poor (ref))	Self-reported heart disease	Odds ratio	1.03 (0.93–1.14)	1.02 (0.92–1.13)	Model 1 adjusted for age only. Model 2 adjusted for education, wealth, current residence, age at displacement, childhood family violence, childhood

						rheumatic fever, childhood poor health, childhood hunger
Addo, 2009	Number of household assets in childhood	Hypertension	Odds ratio	0: 1 1-2: 0.9 (0.58, 1.38) 3-4: 1.00 (0.7, 1.44) 5: 1.38 (0.85, 2.23) p-trend: 0.33	0: 1 1-2: 0.83 (0.53, 1.29) 3-4: 0.86 (0.59, 1.25) 5: 1.20 (0.73, 2.00) p-trend: 0.91	Mode 1 is age and sex adjusted. Model 2 is also adjusted for current assets, employment and education
Mallinson, 2020	Household assets in childhood (per SD increase)	SBP	Linear regression beta coefficient	−0.139 (−0.562, 0.284), p=0.52	−0.698 (−1.165, −0.232), p=0.003	Model 1 is adjusted for age, sex and study. Model 2 is also adjusted for current asset index, occupation and urban/rural.
Mallinson, 2020	Household assets in childhood (per SD increase)	DBP	Linear regression beta coefficient	0.040 (−0.275, 0.355), p=0.805	−0.564 (−0.912, −0.216), p=0.001	
Mallinson, 2020	Household assets in childhood (per SD increase)	Total cholesterol	Linear regression beta coefficient	0.072 (0.041, 0.102), p<0.001	0.006 (−0.026, 0.039), p=0.712	
Mallinson, 2020	Household assets in childhood (per SD increase)	LDL cholesterol	Linear regression beta coefficient	0.055 (0.027, 0.083), p<0.001	−0.010 (−0.040, 0.020), p=0.525	
Mallinson, 2020	Household assets in childhood (per SD increase)	Triglycerides	Linear regression beta coefficient	0.018 (0.005, 0.032), p=0.009	−0.009 (−0.024, 0.005), p=0.212	
Mallinson, 2020	Household assets in childhood (per SD increase)	Fasting glucose	Linear regression beta coefficient	0.015 (0.009, 0.020), p<0.001	0.004 (−0.002, 0.009), p=0.174	
Mallinson, 2020	Household assets in childhood (per SD increase)	Insulin	Linear regression beta coefficient	0.094 (0.068, 0.120), p<0.001	0.021 (−0.006, 0.048), p=0.134	
Mallinson, 2020	Household assets in childhood (per SD increase)	HOMA	Linear regression beta coefficient	0.109 (0.082, 0.137), p<0.001	0.025 (−0.004, 0.054), p=0.089	
Sovio, 2013	Household assets in childhood (high vs low)	SBP - males	Linear regression beta coefficient	1.2 [0.1, 2.2], p=0.027	0.8 [−0.2, 1.9], p=0.068	Model 1 adjusted for age with random effect term for sibling pair and factory

Study	Exposure	Outcome	Measure	Model 1	Model 2	Notes
Sovio, 2013	Household assets in childhood (high vs low)	SBP - females	Linear regression beta coefficient	−1.1 [−2.4, 0.1], p=0.084	−1.1 [−2.4, 0.2], p=0.62	site. Model 2 also adjusted for adult SEP (binary asset index)
Sovio, 2013	Household assets in childhood (high vs low)	HOMA (% difference) - males	Linear regression beta coefficient	19.4 [12.3, 27.0], p<0.001	10.4 [3.6, 17.7], p=0.002	
Sovio, 2013	Household assets in childhood (high vs low)	HOMA (% difference) - females	Linear regression beta coefficient	5.7 [−1.6, 13.5], p=0.129	2.1 [−5.1, 9.9], p=0.57	
Samuel, 2012	Paternal education	High TC:HDL ratio	Odds ratio	Urban men: p=0.3 Urban women: p=0.36 Rural men: p=0.02 (direct) Rural women: p=0.96	None: 1 (ref) 1-8 years: 1.0 (0.8, 1.3) 9-12 years: 1.2 (0.8, 1.7) 12+ years: 0.6 (0.3, 1.4)	Model 1 unadjusted (only stratified prevalences shown). Model 2 adjusted for sex, urban residence, physical activity, occupation, household asset score, education
Samuel, 2012	Paternal education	High triglycerides	Odds ratio	Urban men: p=0.58 Urban women: p=0.04 (inverse/U) Rural men: p=0.27 Rural women: p=0.13	None: 1 (ref) 1-8 years: 0.9 (0.7, 1.3) 9-12 years: 0.9 (0.6, 1.4) 12+ years: 0.9 (0.3, 2.3)	
Samuel, 2012	Paternal education	Hypertension	Odds ratio	Urban men: p=0.23 Urban women: p=0.76 Rural men: p=0.08 Rural women: p=0.74	None: 1 (ref) 1-8 years: 1.1 (0.6, 2.3) 9-12 years: 1.2 (0.5, 3.1) 12+ years: 2.5 (0.5, 10.2)	
Samuel, 2012	Paternal education	Diabetes/IGT/TFG	Odds ratio	Urban men: p=0.69 Urban women: p=0.71 Rural men: p=0.77 Rural women: p=0.01 (direct)	None: 1 (ref) 1-8 years: 1.0 (0.8, 1.2) 9-12 years: 0.9 (0.6, 1.3) 12+ years: 0.8 (0.4, 1.7)	
Peele, 2019	No toilet age 12	Self-reported hypertension	Odds ratio	0.91 (0.91, 1.02)	0.97 (0.86, 1.10)	Model 1 adjusted for age, age squared, sex, marital status, urban residence, childhood hunger and childhood infectious disease. Model 2 also adjusted for education and household expenditure.
Peele, 2019	No books age 12	Self-reported hypertension	Odds ratio	1.20 (0.99, 1.45)	1.29 (1.06, 1.57)	
Peele, 2019	Overcrowding age 12	Self-reported hypertension	Odds ratio	1.13 (0.98, 1.31)	1.16 (1.00, 1.34)	
Peele, 2019	No toilet age 12	Self-reported diabetes	Odds ratio	0.88 (0.71, 1.08)	1.05 (0.84, 1.30)	

Peele, 2019	No books age 12	Self-reported diabetes	Odds ratio	0.94 (0.69, 1.27)	1.13 (0.83, 1.55)	
Peele, 2019	Overcrowding age 12	Self-reported diabetes	Odds ratio	0.88 (0.67, 1.16)	0.95 (0.72, 1.25)	
Ferguson, 2010	Parental education	Metabolic syndrome	Odds ratio	No association (data not shown)	-	Model results not shown, just means by parental education group and p trends. Results for metabolic syndrome not shown at all.
Ferguson, 2010	Parental education	High blood pressure	Odds ratio	No association (data not shown)	-	
Ferguson, 2010	Parental education	Impaired fasting glucose	Odds ratio	No association (data not shown)	-	
Ferguson, 2010	Parental education	Low HDL	Odds ratio	No association (data not shown)	-	
Ferguson, 2010	Parental education	High triglycerides	Odds ratio	No association (data not shown)	-	
Ferguson, 2015	Maternal occupation	SBP - males	Linear regression beta coefficient	Highly skilled/skilled: ref Semiskilled/unskilled: 3.14 (-0.40, 6.69) Unemployed: 2.62 (-0.18, 5.43) Housewife: 2.25 (-0.63, 5.13)	Highly skilled/skilled: ref Semiskilled/unskilled: 3.67 (0.49, 6.85)* Unemployed: 4.81 (1.99, 7.64)** Housewife: 3.37 (0.64, 6.11)*	Model 1 is unadjusted. Model 2 is adjusted for age, height, BMI, birth weight, and maternal age at childbirth
Ferguson, 2015	Maternal occupation	SBP - females	Linear regression beta coefficient	Highly skilled/skilled: ref Semiskilled/unskilled: 2.09 (-0.46, 4.64) Unemployed: 2.07 (-0.17, 4.31) Housewife: 2.16 (-0.18, 4.50)	Highly skilled/skilled: ref Semiskilled/unskilled: 1.81 (-0.65, 4.29) Unemployed: 2.10 (-0.37, 4.39) Housewife: 1.85 (-0.57, 4.26)	
Ferguson, 2015	Maternal occupation	DBP - males	Linear regression beta coefficient	Highly skilled/skilled: ref Semiskilled/unskilled: 1.62 (-1.71, 4.96) Unemployed: 0.86 (-1.78, 3.50) Housewife: 3.42 (0.71, 6.13)*	No association (not shown)	

Ferguson, 2015	Maternal occupation	DBP - females	Linear regression beta coefficient	Highly skilled/skilled: ref Semiskilled/unskilled: 0.45 (-2.22, 3.13) Unemployed: -0.96 (-3.31, 1.38) Housewife: 1.54 (-0.91, 4.00)	No association (not shown)	
Carrillo-Vega, 2019	No shoes during childhood	Incident self-reported diabetes (vs none)	Odds ratio	-	1.47 (1.16, 1.86), p<0.01	Age, sex, marital status, education, perceived economic status, health service provider, local of control, smoking, alcohol drinking, BMI, perceived health, help needed walking, help needed bathing, help needed eating, help needed using toilet, help needed getting into bed, the other childhood SEP measure, not enough money for food in past 2 years, household food shortage, previous diagnosis of: hypertension, cancer, heart attack, respiratory failure, stroke, depression.
Carrillo-Vega, 2019	Went to bed hungry during childhood	Incident self-reported diabetes (vs none)	Odds ratio	-	0.97 (0.77, 1.22), p=0.81	
Carrillo-Vega, 2019	No shoes during childhood	Prevalent self-reported diabetes (vs none)	Odds ratio	-	0.88 (0.76, 1.01), p=0.07	
Carrillo-Vega, 2019	Went to bed hungry during childhood	Prevalent self-reported diabetes (vs none)	Odds ratio	-	1.11 (0.98, 1.26), p=0.12	
Kohler, 2005	Maternal education	Self-reported diabetes	Odds ratio	Some elementary (vs none): 1.082 (se 0.079) Completed elementary (vs not): 0.814* (se 0.094) More than elementary (vs not): 0.581*** (se 0.115)	Some elementary (vs none): 1.008 (se 0.094) Completed elementary (vs not): 0.763* (se 0.121) More than elementary (vs not): 0.594** (se 0.141)	Model 1 adjusted for age, age-squared and sex. Model 2 also adjusted for education, urban residence, marital status, overweight status.
Kohler, 2005	Paternal education	Self-reported diabetes	Odds ratio	Some elementary (vs none): 1.031 (se 0.073) Completed elementary	Some elementary (vs none): 1.024 (se 0.094) Completed elementary (vs	

				(vs not): 0.943 (se 0.102) More than elementary (vs not): 0.854 (se 0.114)	not): 1.205 (se 0.178) More than elementary (vs not): 1.283 (se 0.229)	
Kohler, 2005	Had toilet before age 10	Self-reported diabetes	Odds ratio	0.791** (se 0.062)	0.803** (se 0.072)	
Kohler, 2005	Slept in kitchen before age 10	Self-reported diabetes	Odds ratio	1.005 (se 0.087)	0.969 (se 0.093)	
Kohler, 2005	Went to bed hungry before age 10	Self-reported diabetes	Odds ratio	1.028 (se 0.077)	0.718*** (se 0.086)	
Kohler, 2005	Dropped out of school for financial reasons before age 10	Self-reported diabetes	Odds ratio	1.157** (se 0.079)	1.125 (se 0.086)	
Kohler, 2005	Wore shoes regularly before age 10	Self-reported diabetes	Odds ratio	1.180* (se 0.104)	1.292*** (se 0.125)	
Kohler, 2005	Family received help because of economic problems before age 10	Self-reported diabetes	Odds ratio	0.900 (0.113)	0.880 (se 0.112)	
Beltran-Sanchez, 2011	Had toilet at age 12 (vs didn't)	Hypertension - males	Odds ratio	0.89	1.04	Model 1 is unadjusted. Model 2 is adjusted for age, education, born in city, stunted, overweight status
Beltran-Sanchez, 2011	Had toilet at age 12 (vs didn't)	Hypertension - females	Odds ratio	0.54***	0.77**	
Palloni, 2006	Subjective poor SEP in childhood (poor vs not poor (ref))	Heart disease	Odds ratio	-	Brazil: 1.43, p=0.052 Chile: 1.03, p=0.855 Cuba: 0.98, p=0.886 Mexico: 1.16, p=0.594 Uruguay: 1.25, p=0.249	Gender, age, education, obesity, height and self-reported child health
Palloni, 2006	Subjective poor SEP in childhood (poor vs not poor (ref))	Self-reported diabetes	Odds ratio	-	Brazil: 1.39, p=0.077 Chile: 0.80, p=0.386 Cuba: 0.83, p=0.327 Mexico: 1.19, p=0.351 Uruguay: 0.56, p=0.029	

Ogunsina, 2018	Trajectory mother's and own education (both primary completed or not)	Diabetes reported - men	Odds ratio	-	Stable low: 1 (ref) Declining: 3.12 (1.93-5.02) Increasing: 1.57 (0.28-8.78) Stable high: 4.82 (2.07-11.2)	Age, marital status, country, rural/urban residence, health status and socioeconomic status
Ogunsina, 2018	Trajectory mother's and own education (both primary completed or not)	Diabetes reported- women	Odds ratio	-	Stable low: 1 (ref) Declining: 1.00 (0.59-1.70) Increasing: 0.85 (0.30-2.43) Stable high: 0.81 (0.34-1.91)	
Ogunsina, 2018	Trajectory mother's and own education (both primary completed or not)	Hypertension reported - men	Odds ratio	-	Stable low: 1 (ref) Declining: 1.33 (0.99-1.81) Increasing: 0.90 (0.23-3.64) Stable high: 3.42 (1.85-6.32)	
Ogunsina, 2018	Trajectory mother's and own education (both primary completed or not)	Hypertension reported - women	Odds ratio	-	Stable low: 1 (ref) Declining: 0.99 (0.75-1.33) Increasing: 0.62 (0.34-1.13) Stable high: 0.83 (0.54-1.27)	
Ogunsina, 2018	Trajectory mother's and own education (both primary completed or not)	Hypertension measured - men	Odds ratio	-	Stable low: 1 (ref) Declining: 0.98 (0.71-1.35) Increasing: 0.42 (0.15-1.18) Stable high: 1.17 (0.72-1.92)	
Ogunsina, 2018	Trajectory mother's and own education (both primary completed or not)	Hypertension measured - women	Odds ratio	-	Stable low: 1 (ref) Declining: 0.92 (0.71-1.19) Increasing: 1.35 (0.55-3.34) Stable high: 0.78 (0.52-1.18)	
Vagero, 2005	Self-reported poverty in childhood (yes vs no)	Symptoms of heart disease - men	Odds ratio	-	2.06 (1.50–2.83)	Age, education and marital status
Vagero, 2005	Self-reported poverty in childhood (yes vs no)	Symptoms of heart disease - women	Odds ratio	-	1.78 (1.32–2.39)	
Kagura, 2016	Household asset score in infancy	SBP	Linear regression beta coefficient	-	0.55, −0.46 to 1.55, p=0.285	Sex, current height, age, and SEP trajectory between infancy and 16
Kagura, 2016	Household asset score in infancy	DBP	Linear regression beta coefficient	-	−0.15, −1.01 to 0.70, p=0.726	

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Kagura, 2016	Household asset score in infancy	Hypertension	Odds ratio	-	1.14, 0.86 to 1.52, p=0.359	SEP trajectory between infancy and 16
Naidoo, 2019	Maternal education	Elevated blood pressure	Odds ratio	Primary: 1 (ref) Secondary: 1.07, 0.83–1.37, p=0.612 Tertiary: 0.95, 0.60–1.51, p=0.826	Primary: 1 (ref) Secondary: 1.12, 0.86–1.44, 0.403 Tertiary: 0.98, 0.62–1.58, 0.958	Model 1 is adjusted for age, sex, maternal age, and maternal parity. Model 2 is also adjusted for offspring SEP (asset score)
SEP is socioeconomic position; CIMT is carotid intima-media thickness; CVD is cardiovascular disease; CHD is coronary heart disease; SBP is systolic blood pressure; DBP is diastolic blood pressure; LDL is low-density lipoprotein; HDL is high-density lipoprotein; TC is total cholesterol; HOMA is homeostasis model assessment; IGT is impaired glucose tolerance; IFG is impaired fasting glucose.						

Appendix 3: Supplemental data for chapter 4

Table S3.1 Completed STROBE checklist

	Item No.	Recommendation	Page No.
Title and abstract	1	(*a*) Indicate the study's design with a commonly used term in the title or the abstract	2
		(*b*) Provide in the abstract an informative and balanced summary of what was done and what was found	2
Introduction			
Background/ rationale	2	Explain the scientific background and rationale for the investigation being reported	4
Objectives	3	State specific objectives, including any prespecified hypotheses	4
Methods			
Study design	4	Present key elements of study design early in the paper	4
Setting	5	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection	4
Participants	6	(*a*) *Cohort study*—Give the eligibility criteria, and the sources and methods of selection of participants. Describe methods of follow-up *Case-control study*—Give the eligibility criteria, and the sources and methods of case ascertainment and control selection. Give the rationale for the choice of cases and controls *Cross-sectional study*—Give the eligibility criteria, and the sources and methods of selection of participants	4
		(*b*) *Cohort study*—For matched studies, give matching criteria and number of exposed and unexposed *Case-control study*—For matched studies, give matching criteria and the number of controls per case	NA
Variables	7	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable	5-6
Data sources/ measurement	8*	For each variable of interest, give sources of data and details of methods of assessment (measurement). Describe comparability of assessment methods if there is more than one group	4-5
Bias	9	Describe any efforts to address potential sources of bias	5-6
Study size	10	Explain how the study size was arrived at	NA
Quantitative variables	11	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why	6
Statistical methods	12	(*a*) Describe all statistical methods, including those used to control for confounding	6-7
		(*b*) Describe any methods used to examine subgroups and interactions	6-7
		(*c*) Explain how missing data were addressed	7
		(*d*) *Cohort study*—If applicable, explain how loss to follow-up was addressed *Case-control study*—If applicable, explain how matching of cases and controls was addressed	NA

		Cross-sectional study—If applicable, describe analytical methods taking account of sampling strategy	
		(*e*) Describe any sensitivity analyses	8
Results			
Participants	13*	(a) Report numbers of individuals at each stage of study—eg numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow-up, and analysed	8/figure 1
		(b) Give reasons for non-participation at each stage	8/figure 1
		(c) Consider use of a flow diagram	Figure 1
Descriptive data	14*	(a) Give characteristics of study participants (eg demographic, clinical, social) and information on exposures and potential confounders	7
		(b) Indicate number of participants with missing data for each variable of interest	7, table 1
		(c) *Cohort study*—Summarise follow-up time (eg, average and total amount)	NA
Outcome data	15*	*Cohort study*—Report numbers of outcome events or summary measures over time	NA
		Case-control study—Report numbers in each exposure category, or summary measures of exposure	NA
		Cross-sectional study—Report numbers of outcome events or summary measures	Table 1
Main results	16	(*a*) Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (eg, 95% confidence interval). Make clear which confounders were adjusted for and why they were included	Table 2, 7-8
		(*b*) Report category boundaries when continuous variables were categorized	NA
		(*c*) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period	NA
Other analyses	17	Report other analyses done—eg analyses of subgroups and interactions, and sensitivity analyses	8
Discussion			
Key results	18	Summarise key results with reference to study objectives	11
Limitations	19	Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias	12-13
Interpretation	20	Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence	13
Generalisability	21	Discuss the generalisability (external validity) of the study results	12-13
Other information			
Funding	22	Give the source of funding and the role of the funders for the present study and, if applicable, for the original study on which the present article is based	14

*Give information separately for cases and controls in case-control studies and, if applicable, for exposed and unexposed groups in cohort and cross-sectional studies.

Table S3.2 Differences between participants with complete and incomplete data on cardiovascular risk factors

Sociodemographic characteristics		N (%) / mean (standard deviation)		
		Complete data (n=12,852)	Incomplete data (n=1111*)	p-value difference**
Study	APCAPS	6028 (46.9%)	868 (78.1%)	<0.001
	IMS	6824 (53.1%)	243 (21.9%)	
Age		37.6 (12.7)	36.6 (14.8)	0.02
Sex	Male	7144 (55.6%)	608 (54.7%)	0.55
	Female	5708 (44.4%)	503 (45.3%)	
Childhood household asset score		9.7 (5.0)	9.0 (5.1)	0.33
Adult household asset score		21.1 (6.5)	19.7 (6.0)	0.59
Adult occupation	Unskilled labour or unemployed	2884 (22.4%)	342 (30.8%)	0.08
	Student, retired or housewife	4399 (34.2%)	396 (35.6%)	
	Semi-skilled labour	1518 (11.8%)	131 (11.79%)	
	Skilled labour	2110 (16.4%)	146 (13.1%)	
	Professional	1941 (15.1%)	96 (8.6%)	
Adult residence	Rural	8622 (67.1%)	942 (84.8%)	0.02
	Urban	4230 (32.9%)	169 (15.2%)	

APCAPS=Andhra Pradesh Children and Parents' Study, IMS=Indian Migration Study
*Excluding 48 participants who did not have complete data on sociodemographic characteristics
**P-values based on likelihood ratio tests from logistic regression models adjusting for study (i.e. APCAPS or IMS)

Table S3.3 Association between standard of living index (SLI) in childhood and cardiovascular risk factors in pooled sample of IMS (2005-7) and APCAPS (2010-12) stratified by standard of living index in adulthood (above or below the median)

Cardiovascular risk factor	N	Low standard of living index in adulthood (adjusted for age, sex and urban residence)			High standard of living index in adulthood (adjusted for age, sex and urban residence)			P-value interaction
		β-coefficient for 1 SD change in childhood SLI	Lower confidence limit	Upper confidence limit	β-coefficient for 1 SD change in childhood SLI	Lower confidence limit	Upper confidence limit	
Systolic blood pressure, mmHg	13931	-0.209	-0.880	0.463	-0.323	-0.894	0.247	0.786
Diastolic blood pressure, mmHg	13950	-0.445	-0.947	0.058	-0.214	-0.640	0.211	0.466
Total cholesterol, mmol/L	13592	0.047	0.001	0.094	0.019	-0.021	0.058	0.324
LDL cholesterol, mmol/L	12974	0.033	-0.011	0.076	0.004	-0.033	0.040	0.281
Log triglycerides, mmol/L	13144	0.006	-0.016	0.028	-0.006	-0.025	0.012	0.381
Log fasting glucose, mmol/L	13224	0.011	0.003	0.019	0.005	-0.002	0.011	0.208
Log insulin, mU/L	13231	0.063	0.023	0.103	0.039	0.005	0.072	0.325
Log HOMA score	13184	0.072	0.030	0.114	0.046	0.010	0.081	0.306
Body mass index, kg/m^2	13942	0.430	0.262	0.599	0.161	0.019	0.304	0.010
Waist circumference, mm	13918	13.80	9.431	18.18	1.623	-2.001	5.246	<0.001
Height, mm	13942	7.094	4.300	9.888	7.308	4.916	9.701	0.900

APCAPS=Andhra Pradesh Children and Parents' Study, IMS=Indian Migration Study, SD=standard deviation, SLI=standard of living index, LDL=low-density lipoprotein, HOMA=homeostasis model assessment

Table S3.4 Association between standard of living index (SLI) in childhood and cardiovascular risk factors in pooled sample of IMS (2005-7) and APCAPS (2010-12), stratified by sex.

Cardiovascular risk factor	N	Females (adjusted for age and adult socioeconomic conditions*)			Males (adjusted for age and adult socioeconomic conditions*)			P-value interaction
		β-coefficient for 1 SD change in childhood SLI	Lower confidence limit	Upper confidence limit	β-coefficient for 1 SD change in childhood SLI	Lower confidence limit	Upper confidence limit	
Systolic blood pressure, mmHg	13931	-0.851	-1.489	-0.213	-0.350	-0.951	0.252	0.193
Diastolic blood pressure, mmHg	13950	-0.558	-1.034	-0.083	-0.592	-1.043	-0.142	0.906
Total cholesterol, mmol/L	13592	-0.004	-0.048	0.040	0.009	-0.033	0.050	0.625
LDL cholesterol, mmol/L	12974	-0.024	-0.065	0.017	0.000	-0.039	0.039	0.321
Log triglycerides, mmol/L	13144	-0.008	-0.028	0.013	-0.015	-0.035	0.004	0.554
Log fasting glucose, mmol/L	13224	-0.001	-0.008	0.007	0.004	-0.003	0.011	0.289
Log insulin, mU/L	13231	-0.021	-0.058	0.016	0.043	0.008	0.078	0.005
Log HOMA score	13184	-0.020	-0.059	0.019	0.046	0.009	0.083	0.006
Body mass index, kg/m^2	13942	0.206	0.049	0.363	-0.110	-0.259	0.039	0.001
Waist circumference, mm	13918	-6.709	-10.72	-2.697	4.838	1.055	8.621	<0.001
Height, mm	13942	5.523	2.882	8.164	5.396	2.904	7.887	0.935

APCAPS=Andhra Pradesh Children and Parents' Study, IMS=Indian Migration Study, SD=standard deviation, SLI=standard of living index, LDL=low-density lipoprotein, HOMA=homeostasis model assessment

*Adult standard of living index (linear and quadratic term), adult occupation (categorical) and adult urban or rural residence (binary)

Table S3.5 Association between standard of living index (SLI) in childhood and cardiovascular risk factors in pooled sample of IMS (2005-7) and APCAPS (2010-12), stratified by study (APCAPS or IMS).

Cardiovascular risk factor	N	APCAPS (adjusted for age, sex and adult socioeconomic conditions*)			IMS (adjusted for age, sex and adult socioeconomic conditions*)			P-value interaction
		β-coefficient for 1 SD change in childhood SLI	Lower confidence limit	Upper confidence limit	β-coefficient for 1 SD change in childhood SLI	Lower confidence limit	Upper confidence limit	
Systolic blood pressure, mmHg	13931	-0.199	-0.961	0.564	-0.938	-1.718	-0.158	0.224
Diastolic blood pressure, mmHg	13950	-0.294	-0.864	0.275	-0.853	-1.434	-0.272	0.216
Total cholesterol, mmol/L	13592	-0.035	-0.088	0.017	0.039	-0.015	0.094	0.077
LDL cholesterol, mmol/L	12974	-0.030	-0.079	0.020	0.006	-0.043	0.055	0.364
Log triglycerides, mmol/L	13144	-0.028	-0.054	-0.003	0.003	-0.021	0.027	0.108
Log fasting glucose, mmol/L	13224	-0.010	-0.019	-0.001	0.012	0.003	0.021	0.002
Log insulin, mU/L	13231	-0.010	-0.055	0.036	0.037	-0.008	0.081	0.190
Log HOMA score	13184	-0.018	-0.066	0.029	0.048	0.001	0.095	0.078
Body mass index, kg/m^2	13942	-0.317	-0.506	-0.128	0.368	0.173	0.564	<0.001
Waist circumference, mm	13918	-9.505	-14.34	-4.673	8.682	3.747	13.616	<0.001
Height, mm	13942	6.328	3.204	9.452	4.599	1.297	7.900	0.494

APCAPS=Andhra Pradesh Children and Parents' Study, IMS=Indian Migration Study, SD=standard deviation, SLI=standard of living index, LDL=low-density lipoprotein, HOMA=homeostasis model assessment

*Adult standard of living index (linear and quadratic term), adult occupation (categorical) and adult urban or rural residence (binary)

Table S3.6 Association between standard of living index (SLI) in childhood and cardiovascular risk factors in pooled sample of IMS (2005-7) and APCAPS (2010-12), not accounting for measurement error in childhood standard of living index.

Cardiovascular risk factor	Model 1: Age- and sex-adjusted					Model 2: model 1 + adult socioeconomic conditions*				
	N	β-coefficient for 1 SD change in childhood SLI	Lower confidence limit	Upper confidence limit	p-value	N	β-coefficient for 1 SD change in childhood SLI	Lower confidence limit	Upper confidence limit	p-value
Systolic blood pressure, mmHg	13943	-0.169	-0.456	0.118	0.248	13931	-0.512	-0.826	-0.198	0.001
Diastolic blood pressure, mmHg	13962	-0.049	-0.263	0.165	0.653	13950	-0.444	-0.678	-0.210	<0.001
Total cholesterol, mmol/L	13604	0.041	0.021	0.062	<0.001	13592	-0.001	-0.023	0.021	0.947
LDL cholesterol, mmol/L	12984	0.029	0.010	0.048	0.003	12974	-0.013	-0.033	0.008	0.217
Log triglycerides, mmol/L	13154	0.011	0.002	0.020	0.021	13144	-0.007	-0.018	0.003	0.146
Log fasting glucose, mmol/L	13235	0.009	0.006	0.012	<0.001	13224	0.002	-0.001	0.006	0.196
Log insulin, mU/L	13242	0.060	0.042	0.077	<0.001	13231	0.011	-0.008	0.029	0.266
Log HOMA score	13195	0.069	0.051	0.087	<0.001	13184	0.013	-0.006	0.033	0.183
Body mass index, kg/m^2	13954	0.515	0.440	0.590	<0.001	13942	0.045	-0.033	0.123	0.258
Waist circumference, mm	13930	12.48	10.59	14.37	<0.001	13918	-0.034	-2.017	1.948	0.973
Height, mm	13954	5.530	4.303	6.758	<0.001	13942	3.060	1.757	4.364	<0.001

APCAPS=Andhra Pradesh Children and Parents' Study, IMS=Indian Migration Study, SD=standard deviation, SLI=standard of living index, LDL=low-density lipoprotein, HOMA=homeostasis model assessment
*Adult standard of living index (linear and quadratic terms), adult occupation (categorical) and adult urban or rural residence (binary)

Table S3.7: Association between standard of living index (SLI) in adulthood and cardiovascular risk factors in pooled sample of IMS (2005-7) and APCAPS (2010-12)

Cardiovascular risk factor	N	β-coefficient for 1 SD change in adult SLI	Lower confidence limit	Upper confidence limit	p-value
Systolic blood pressure, mmHg	13931	0.120	0.074	0.165	<0.001
Diastolic blood pressure, mmHg	13950	0.133	0.099	0.167	<0.001
Total cholesterol, mmol/L	13592	0.015	0.012	0.018	<0.001
LDL cholesterol, mmol/L	12974	0.014	0.011	0.017	<0.001
Log triglycerides, mmol/L	13144	0.006	0.005	0.008	<0.001
Log fasting glucose, mmol/L	13224	0.002	0.002	0.003	<0.001
Log insulin, mU/L	13231	0.018	0.016	0.021	<0.001
Log HOMA score	13184	0.021	0.018	0.023	<0.001
Body mass index, kg/m^2	13942	0.172	0.161	0.184	<0.001
Waist circumference, mm	13918	4.405	4.116	4.693	<0.001
Height, mm	13942	0.915	0.729	1.100	<0.001

APCAPS=Andhra Pradesh Children and Parents' Study, IMS=Indian Migration Study, SD=standard deviation, SLI=standard of living index, LDL=low-density lipoprotein, HOMA=homeostasis model assessment
Model adjusted for age, sex, childhood SLI and study, with family-level random intercept.

Appendix 4: Supplemental data for chapter 5

Table S4.1 Completed STROBE checklist

	Item No	Recommendation	Paragraph
Title and abstract	1	(*a*) Indicate the study's design with a commonly used term in the title or the abstract	Abstract
		(*b*) Provide in the abstract an informative and balanced summary of what was done and what was found	Abstract
Introduction			
Background/ rationale	2	Explain the scientific background and rationale for the investigation being reported	Introduction Para 1-2
Objectives	3	State specific objectives, including any prespecified hypotheses	Introduction Para 3
Methods			
Study design	4	Present key elements of study design early in the paper	Methods Para 1
Setting	5	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection	Methods Para 1
Participants	6	(*a*) Give the eligibility criteria, and the sources and methods of selection of participants	Methods Para 1
Variables	7	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable	Methods Para 7-8
Data sources/ measurement	8*	For each variable of interest, give sources of data and details of methods of assessment (measurement). Describe comparability of assessment methods if there is more than one group	Methods Para 2-6
Bias	9	Describe any efforts to address potential sources of bias	Methods Para 5 and 8
Study size	10	Explain how the study size was arrived at	Methods Para 1 and 8
Quantitative variables	11	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why	Methods Para 2-4, 6-8
Statistical methods	12	(*a*) Describe all statistical methods, including those used to control for confounding	Methods Para 7-8
		(*b*) Describe any methods used to examine subgroups and interactions	Methods Para 8
		(*c*) Explain how missing data were addressed	Methods Para 8
		(*d*) If applicable, describe analytical methods taking account of sampling strategy	NA
		(*e*) Describe any sensitivity analyses	Methods Para 8

Results

Participants	13*	(a) Report numbers of individuals at each stage of study—eg numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow-up, and analysed	Methods Para 1, Results Para 1
		(b) Give reasons for non-participation at each stage	Methods Para 1, Results Para 1
		(c) Consider use of a flow diagram	NA
Descriptive data	14*	(a) Give characteristics of study participants (eg demographic, clinical, social) and information on exposures and potential confounders	Results Para 1
		(b) Indicate number of participants with missing data for each variable of interest	Results Para 1 and Table 1
Outcome data	15*	Report numbers of outcome events or summary measures	Results Para 2 and Table 1
Main results	16	(*a*) Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (eg, 95% confidence interval). Make clear which confounders were adjusted for and why they were included	Results Para 3 and Figures 1-3
		(*b*) Report category boundaries when continuous variables were categorized	NA
		(*c*) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period	NA
Other analyses	17	Report other analyses done—eg analyses of subgroups and interactions, and sensitivity analyses	Results Para 4-5

Discussion

Key results	18	Summarise key results with reference to study objectives	Discussion Para 1
Limitations	19	Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias	Discussion Para 6
Interpretation	20	Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence	Discussion Para 2-4, 7-8
Generalisability	21	Discuss the generalisability (external validity) of the study results	Discussion Para 6

Other information

Funding	22	Give the source of funding and the role of the funders for the present study and, if applicable, for the original study on which the present article is based	Funding section

*Give information separately for exposed and unexposed groups.

Table S4.2 Difference between participants with complete vs incomplete data, Andhra Pradesh Children and Parents' Study (APCAPS), 2010-2012.

Socio-demographic characteristics		Maternal exposures			Paternal exposures			Additional clinic for subclinical cardiovascular measures		
		Complete data (n=2795)	Incomplete data* (n=359)	p-value	Complete data (n=2272)	Incomplete data* (n=882)	p-value	Complete data (n=1286)	Incomplete data (n=1868)	p-value
Age		24.3 (3.8)	24.8 (3.9)	0.02	24.2 (3.7)	24.9 (4.0)	<0.001	24.3 (4.0)	24.4 (3.7)	0.18
Sex	Male	1641 (58%)	193 (54%)	0.07	1351 (59%)	483 (55%)	0.02	786 (61%)	1048 (56%)	0.01
	Female	1154 (41%)	166 (46%)		921 (41%)	399 (45%)		500 (39%)	820 (44%)	
Childhood Standard of Living Index		15.9 (7.6)	15.9 (8.1)	0.98	16.2 (7.6)	15.0 (7.6)	<0.001	16.0 (7.7)	15.8 (7.6)	0.38
Adult Standard of Living Index		29.9 (8.4)	30.4 (9.5)	0.28	30.4 (8.4)	29.0 (8.7)	<0.001	29.9 (8.3)	30.0 (8.7)	0.72
Adult occupation	Unskilled labour or unemployed	699 (25%	102 (28%)		558 (25%)	243 (28%)		367 (29%)	434 (23%)	
	Student, retired or housewife	1092 (39%)	135 (38%)	0.28	900 (40%)	327 (37%)	0.24	493 (38%)	734 (39%)	0.001
	Semi-skilled labour	286 (10%)	44 (12%)		242 (11%)	88 (10%)		143 (11%)	187 (10%)	
	Skilled labour	468 (17%)	53 (15%)		366 (16%)	155 (18%)		190 (15%)	331 (18%)	
	Professional	250 (9%)	25 (7%)		206 (9%)	69 (8%)		93 (7%)	182 (10%)	

*Incomplete data includes participants with incomplete data for any of the main cardiovascular risk factors. All counts exclude 21 participants with incomplete data on socio-demographic characteristics.

Table S4.3 Association between mother's childhood standard of living index (SLI) and cardiovascular risk of the offspring in the Andhra Pradesh Children and Parents' Study (APCAPS), 2010-2012.

Cardiovascular risk factor	Model 1: Age- and sex-adjusted					Model 2: model 1 + offspring's childhood and adult socioeconomic conditions[1]				
	N	β	Lower CI	Upper CI	p-value	N	β	Lower CI	Upper CI	p-value
Carotid IMT, mm	1317	-0.002	-0.012	0.007	0.622	1312	0.001	-0.009	0.011	0.887
Pulse wave velocity, m/s	1310	-0.012	-0.053	0.030	0.581	1307	-0.013	-0.057	0.030	0.541
Augmentation index, %	1230	-0.399	-0.862	0.064	0.091	1227	-0.211	-0.693	0.271	0.391
Systolic blood pressure, mmHg	2751	-0.088	-0.512	0.335	0.682	2728	-0.170	-0.613	0.273	0.452
Diastolic blood pressure, mmHg	2751	-0.026	-0.456	0.404	0.905	2728	-0.175	-0.623	0.272	0.443
Total cholesterol, mg/dL	2666	0.080	-1.427	1.587	0.917	2645	-0.431	-2.009	1.146	0.592
Log HDL cholesterol, mg/dL	2659	0.003	-0.010	0.015	0.652	2638	0.007	-0.006	0.020	0.283
Log triglycerides, mg/dL	2650	-0.012	-0.032	0.009	0.256	2629	-0.014	-0.036	0.007	0.193
Log fasting glucose, mmol/dL	2657	0.001	-0.004	0.006	0.710	2637	0.000	-0.005	0.005	0.996
Log fasting insulin, mU/L	2624	0.014	-0.018	0.045	0.400	2603	-0.002	-0.035	0.031	0.918
Log C-reactive protein, mg/L	2660	0.019	-0.035	0.072	0.497	2639	0.008	-0.048	0.064	0.772
Body mass index, kg/m^2	2744	0.253	0.103	0.403	0.001*	2721	0.160	0.006	0.313	0.042
Waist circumference, mm	2737	0.534	0.166	0.901	0.004*	2714	0.274	-0.100	0.648	0.151
Log abdominal fat mass, kg	1344	0.008	-0.027	0.043	0.657	1339	-0.006	-0.042	0.029	0.721

IMT is intima media thickness; HDL is high-density lipoprotein. Beta coefficient represents the effect of a 1-SD change in mother's childhood SLI.
[1]Childhood SLI (linear), adult standard of living index (linear) and adult occupation (categorical)
*P-value significant after accounting for multiple testing (using Benjamini Hochberg method with 5% false discovery rate)

Table S4.4 Association between father's childhood standard of living index (SLI) and cardiovascular risk of the offspring in the Andhra Pradesh Children and Parents' Study (APCAPS), 2010-2012.

Cardiovascular risk factor	Model 1: Age- and sex-adjusted					Model 2: model 1 + offspring's childhood and adult socioeconomic conditions[1]				
	N	β	Lower CI	Upper CI	p-value	N	β	Lower CI	Upper CI	p-value
Carotid IMT, mm	1098	0.004	-0.006	0.014	0.418	1095	0.007	-0.003	0.017	0.192
Pulse wave velocity, m/s	1084	0.002	-0.040	0.045	0.924	1081	0.002	-0.042	0.046	0.930
Augmentation index, %	1019	-0.203	-0.670	0.265	0.395	1016	-0.062	-0.544	0.420	0.801
Systolic blood pressure, mmHg	2240	-0.138	-0.614	0.338	0.569	2226	-0.294	-0.784	0.197	0.241
Diastolic blood pressure, mmHg	2240	-0.153	-0.633	0.326	0.531	2226	-0.376	-0.867	0.115	0.133
Total cholesterol, mg/dL	2169	-0.611	-2.270	1.048	0.470	2157	-1.067	-2.786	0.651	0.224
Log HDL cholesterol, mg/dL	2166	-0.007	-0.021	0.007	0.362	2154	-0.002	-0.017	0.012	0.744
Log triglycerides, mg/dL	2158	-0.013	-0.036	0.009	0.253	2146	-0.014	-0.038	0.009	0.225
Log fasting glucose, mmol/dL	2166	0.002	-0.004	0.007	0.576	2154	0.001	-0.005	0.007	0.786
Log fasting insulin, mU/L	2138	0.024	-0.012	0.059	0.192	2126	0.007	-0.029	0.044	0.693
Log C-reactive protein, mg/L	2163	0.037	-0.024	0.097	0.231	2151	0.037	-0.025	0.100	0.242
Body mass index, kg/m^2	2233	0.094	-0.072	0.259	0.266	2219	-0.022	-0.189	0.145	0.795
Waist circumference, mm	2227	0.166	-0.237	0.569	0.420	2213	-0.114	-0.519	0.291	0.581
Log abdominal fat mass, kg	1110	0.022	-0.014	0.059	0.232	1107	0.009	-0.027	0.046	0.618

IMT is intima media thickness; HDL is high-density lipoprotein. Beta coefficient represents the effect of a 1-SD change in father's childhood SLI.
[1]Childhood SLI (linear), adult standard of living index (linear) and adult occupation (categorical)
*P-value significant after accounting for multiple testing (using Benjamini Hochberg method with 5% false discovery rate)

Table S4.5 Association between mother's height and cardiovascular risk of the offspring in the Andhra Pradesh Children and Parents' Study (APCAPS), 2010-2012.

Cardiovascular risk factor	Model 1: Age- and sex-adjusted					Model 2: model 1 + offspring's childhood and adult socioeconomic conditions[1]				
	N	β	Lower CI	Upper CI	p-value	N	β	Lower CI	Upper CI	p-value
Carotid IMT, mm	1396	0.002	-0.007	0.011	0.654	1391	0.003	-0.006	0.012	0.537
Pulse wave velocity, m/s	1358	0.032	-0.007	0.072	0.106	1353	0.028	-0.011	0.068	0.159
Augmentation index, %	1272	-0.498	-0.936	-0.060	0.026	1267	-0.423	-0.863	0.016	0.059
Systolic blood pressure, mmHg	3003	0.342	-0.068	0.753	0.102	2990	0.300	-0.111	0.711	0.153
Diastolic blood pressure, mmHg	3003	0.487	0.072	0.902	0.021	2990	0.416	0.002	0.830	0.049
Total cholesterol, mg/dL	2913	0.325	-1.146	1.796	0.665	2900	0.011	-1.472	1.493	0.989
Log HDL cholesterol, mg/dL	2906	0.003	-0.008	0.015	0.572	2893	0.005	-0.007	0.017	0.434
Log triglycerides, mg/dL	2896	0.003	-0.016	0.023	0.736	2884	0.002	-0.018	0.022	0.842
Log fasting glucose, mmol/dL	2903	-0.001	-0.006	0.004	0.708	2890	-0.002	-0.006	0.003	0.548
Log fasting insulin, mU/L	2871	0.043	0.013	0.074	0.005*	2858	0.035	0.005	0.066	0.022
Log C-reactive protein, mg/L	2906	0.035	-0.017	0.087	0.187	2893	0.030	-0.023	0.082	0.268
Body mass index, kg/m^2	2996	0.185	0.041	0.330	0.012	2983	0.130	-0.013	0.272	0.074
Waist circumference, mm	2988	0.979	0.629	1.329	<0.001*	2975	0.852	0.507	1.196	<0.001*
Log abdominal fat mass, kg	1428	0.018	-0.015	0.050	0.286	1423	0.008	-0.024	0.040	0.630

IMT is intima media thickness; HDL is high-density lipoprotein. Beta coefficient represents the effect of a 1-SD (5.4cm) change in mother's height.
[1]Childhood SLI (linear), adult standard of living index (linear) and adult occupation (categorical)
*P-value significant after accounting for multiple testing (using Benjamini Hochberg method with 5% false discovery rate)

Table S4.6 Association between father's height and cardiovascular risk of the offspring in the Andhra Pradesh Children and Parents' Study (APCAPS), 2010-2012.

Cardiovascular risk factor	Model 1: Age- and sex-adjusted					Model 2: model 1 + offspring's childhood and adult socioeconomic conditions[1]				
	N	β	Lower CI	Upper CI	p-value	N	β	Lower CI	Upper CI	p-value
Carotid IMT, mm	1165	0.000	-0.009	0.010	0.932	1160	0.002	-0.008	0.011	0.706
Pulse wave velocity, m/s	1129	0.004	-0.037	0.046	0.848	1124	0.004	-0.038	0.046	0.847
Augmentation index, %	1057	-0.463	-0.916	-0.011	0.045	1052	-0.364	-0.822	0.094	0.120
Systolic blood pressure, mmHg	2444	-0.063	-0.520	0.395	0.787	2433	-0.139	-0.600	0.321	0.553
Diastolic blood pressure, mmHg	2444	-0.025	-0.486	0.435	0.914	2433	-0.136	-0.597	0.326	0.565
Total cholesterol, mg/dL	2365	2.209	0.612	3.807	0.007*	2354	1.769	0.149	3.389	0.032
Log HDL cholesterol, mg/dL	2362	0.003	-0.010	0.016	0.618	2351	0.005	-0.008	0.018	0.455
Log triglycerides, mg/dL	2353	0.013	-0.008	0.034	0.231	2342	0.012	-0.009	0.034	0.266
Log fasting glucose, mmol/dL	2360	-0.001	-0.007	0.004	0.586	2349	-0.002	-0.007	0.003	0.428
Log fasting insulin, mU/L	2334	0.052	0.019	0.086	0.002*	2323	0.040	0.006	0.074	0.019
Log C-reactive protein, mg/L	2358	-0.010	-0.068	0.049	0.748	2347	-0.014	-0.073	0.045	0.637
Body mass index, kg/m^2	2436	0.195	0.037	0.353	0.015	2425	0.120	-0.037	0.276	0.134
Waist circumference, mm	2428	0.874	0.492	1.256	<0.001*	2417	0.708	0.331	1.086	<0.001*
Log abdominal fat mass, kg	1181	0.023	-0.012	0.059	0.200	1176	0.009	-0.026	0.044	0.618

IMT is intima media thickness; HDL is high-density lipoprotein. Beta coefficient represents the effect of a 1-SD (6.3cm) change in father's height.
[1]Childhood SLI (linear), adult standard of living index (linear) and adult occupation (categorical)
*P-value significant after accounting for multiple testing (using Benjamini Hochberg method with 5% false discovery rate)

Table S4.7 Association between mother's leg length and cardiovascular risk of the offspring in the Andhra Pradesh Children and Parents' Study (APCAPS), 2010-2012.

Cardiovascular risk factor	Model 1: Age- and sex-adjusted					Model 2: model 1 + offspring's childhood and adult socioeconomic conditions[1]				
	N	β	Lower CI	Upper CI	p-value	N	β	Lower CI	Upper CI	p-value
Carotid IMT, mm	1393	0.004	-0.005	0.013	0.376	1388	0.004	-0.005	0.013	0.358
Pulse wave velocity, m/s	1357	0.014	-0.025	0.053	0.477	1352	0.010	-0.028	0.049	0.603
Augmentation index, %	1271	-0.304	-0.737	0.129	0.168	1266	-0.271	-0.703	0.161	0.219
Systolic blood pressure, mmHg	2995	0.155	-0.254	0.564	0.458	2982	0.135	-0.273	0.542	0.517
Diastolic blood pressure, mmHg	2995	0.177	-0.236	0.591	0.400	2982	0.148	-0.262	0.559	0.479
Total cholesterol, mg/dL	2905	-0.196	-1.666	1.275	0.794	2892	-0.400	-1.874	1.074	0.595
Log HDL cholesterol, mg/dL	2898	0.004	-0.008	0.016	0.497	2885	0.004	-0.008	0.016	0.481
Log triglycerides, mg/dL	2888	-0.005	-0.025	0.014	0.590	2876	-0.007	-0.026	0.013	0.495
Log fasting glucose, mmol/dL	2895	0.000	-0.005	0.004	0.867	2882	-0.001	-0.006	0.004	0.773
Log fasting insulin, mU/L	2863	0.015	-0.016	0.045	0.349	2850	0.011	-0.019	0.041	0.469
Log C-reactive protein, mg/L	2898	0.006	-0.046	0.058	0.822	2885	0.004	-0.048	0.057	0.866
Body mass index, kg/m^2	2988	-0.044	-0.188	0.100	0.547	2975	-0.066	-0.207	0.075	0.359
Waist circumference, mm	2980	0.522	0.170	0.873	0.004*	2967	0.473	0.130	0.816	0.007
Log abdominal fat mass, kg	1425	-0.001	-0.033	0.031	0.957	1420	-0.006	-0.038	0.025	0.688

IMT is intima media thickness; HDL is high-density lipoprotein. Beta coefficient represents the effect of a 1-SD (3.6cm) change in mother's leg length.
[1]Childhood SLI (linear), adult standard of living index (linear) and adult occupation (categorical)
*P-value significant after accounting for multiple testing (using Benjamini Hochberg method with 5% false discovery rate)

Table S4.8 Association between father's leg length and cardiovascular risk of the offspring in the Andhra Pradesh Children and Parents' Study (APCAPS), 2010-2012.

Cardiovascular risk factor	Model 1: Age- and sex-adjusted					Model 2: model 1 + offspring's childhood and adult socioeconomic conditions[1]				
	N	β	Lower CI	Upper CI	p-value	N	β	Lower CI	Upper CI	p-value
Carotid IMT, mm	1165	-0.001	-0.010	0.009	0.917	1160	0.000	-0.009	0.010	0.928
Pulse wave velocity, m/s	1129	0.002	-0.039	0.044	0.910	1124	0.002	-0.039	0.044	0.914
Augmentation index, %	1057	-0.237	-0.689	0.214	0.303	1052	-0.160	-0.611	0.291	0.486
Systolic blood pressure, mmHg	2442	-0.376	-0.833	0.081	0.107	2431	-0.388	-0.842	0.067	0.095
Diastolic blood pressure, mmHg	2442	-0.354	-0.814	0.107	0.133	2431	-0.379	-0.836	0.078	0.104
Total cholesterol, mg/dL	2363	1.250	-0.354	2.854	0.127	2352	1.062	-0.546	2.670	0.195
Log HDL cholesterol, mg/dL	2360	0.009	-0.004	0.022	0.172	2349	0.010	-0.003	0.023	0.145
Log triglycerides, mg/dL	2351	0.001	-0.021	0.022	0.940	2340	0.001	-0.021	0.022	0.945
Log fasting glucose, mmol/dL	2358	0.000	-0.005	0.005	0.971	2347	0.000	-0.005	0.005	0.954
Log fasting insulin, mU/L	2332	0.016	-0.017	0.050	0.342	2321	0.011	-0.022	0.044	0.508
Log C-reactive protein, mg/L	2356	-0.032	-0.091	0.026	0.278	2345	-0.033	-0.092	0.025	0.265
Body mass index, kg/m^2	2434	-0.108	-0.266	0.051	0.182	2423	-0.137	-0.292	0.018	0.083
Waist circumference, mm	2426	0.268	-0.118	0.654	0.174	2415	0.201	-0.175	0.577	0.295
Log abdominal fat mass, kg	1181	-0.008	-0.044	0.027	0.647	1176	-0.016	-0.051	0.018	0.348

IMT is intima media thickness; HDL is high-density lipoprotein. Beta coefficient represents the effect of a 1-SD (4.1cm) change in father's leg length.
[1]Childhood SLI (linear), adult standard of living index (linear) and adult occupation (categorical)
*P-value significant after accounting for multiple testing (using Benjamini Hochberg method with 5% false discovery rate)

Table S4.9: Association between standard of living index (SLI) in adulthood and cardiovascular risk among the offspring of the Andhra Pradesh Children and Parents' Study (APCAPS), 2010-2012.

Cardiovascular risk factor	N	β	Lower CI	Upper CI	p-value
Carotid IMT, mm	1467	-0.002	-0.012	0.008	0.713
Pulse wave velocity, m/s	1425	0.044	0.000	0.087	0.050
Augmentation index, %	1335	-0.507	-0.981	-0.032	0.036
Systolic blood pressure, mmHg	3152	0.740	0.331	1.149	<0.001
Diastolic blood pressure, mmHg	3152	1.085	0.678	1.492	<0.001
Total cholesterol, mg/dL	3049	3.004	1.561	4.448	<0.001
Log HDL cholesterol, mg/dL	3042	-0.012	-0.023	-0.001	0.039
Log triglycerides, mg/dL	3032	0.029	0.009	0.049	0.005
Log fasting glucose, mmol/dL	3038	0.010	0.005	0.014	<0.001
Log fasting insulin, mU/L	3005	0.091	0.060	0.122	<0.001
Log C-reactive protein, mg/L	3040	0.060	0.007	0.113	0.027
Body mass index, kg/m^2	3142	0.502	0.364	0.639	<0.001
Waist circumference, mm	3134	1.402	1.060	1.744	<0.001
Log abdominal fat mass, kg	1499	0.107	0.073	0.140	<0.001

IMT is intima media thickness; HDL is high-density lipoprotein.
Beta coefficient represents the effect of a 1-SD change in offspring's adult SLI.
Model adjusted for offspring's age, sex and childhood SLI, with family-level random intercept.