

Life-course Inequalities in Intrinsic Capacity among Chinese Older Adults

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Early-life risk factors

One aim of this study was to estimate how life-course factors contributed to inequalities in intrinsic capacity. We included 11 dimensions of early-life factors.

- (i) Maternal and paternal education levels were classified as low (illiterate) or high (literate). In cases of parental divorce, we used the education level of the biological mother, adopted mother or stepmother who spent the most time raising the respondent before the age of 17.
- (ii) Parental mental health problem was measured by the presence of any mental health problem in three questions about the female and male guardian separately: (1) ‘During your childhood, did your female/male guardian often feel nervous and anxious?’, (2) ‘During your childhood, did your female/male guardian get upset easily or feel panicky?’ and (3) ‘During the years you were growing up, did your female/male guardian show continued signs of sadness or depression that lasted 2 weeks or more?’ This was classified as low (none, a little or some of the time) or high (a good part or most of the time).
- (iii) Family economic status was measured based on the question ‘When you were a child before age 17, compared to the average family in the same community/village at that time, how was your family’s financial situation?’ It was classified as low (somewhat or a lot worse than others), average (same as others) or high (somewhat or a lot better off than others).
- (iv) Nutritional status before age 17 was reflected by the duration of hunger experienced in three childhood periods (age 0–3, 6–12 and 13–17 years). It was categorised as none (did not experience hunger), low (experienced hunger in one period), moderate (experienced hunger in two periods) and severe (experienced hunger in three periods). To avoid selection bias due to severe starvation, we included two binary variables to indicate starvation experienced during the Great Leap Forward (1958–1962) and the presence of any family member who starved to death.
- (v) Domestic violence was measured by three questions asking participants whether the female guardian, male guardian or siblings ever hit them when they grew up. For each question, participants who responded ‘often’ or ‘sometimes’ were considered to have experienced domestic violence, and those who answered ‘rarely’ or ‘never’ were considered not to have.
- (vi) Childhood neighbourhood quality before age 17 was assessed by four questions asking participants whether the neighbourhood where they lived as a child was safe, willing to help, close-knit, and clean and attractive. Each measure was dichotomised as low (not very or not at all) and high (somewhat or very). The overall neighbourhood quality was measured by the sum score of the four measures, ranging from 0 (lowest) to 4 (highest).
- (vii) Childhood health status was measured using participants’ self-rated health before age 16 years compared to other children of the same age. It was classified as high (somewhat or much healthier), average (about average) or low (somewhat or much less healthy). We included another two variables to indicate whether respondents had experienced severe illness in early life by asking whether they were ever confined to bed or home for a month or more because of a health condition before and from the age of 16 years.
- (viii) Friendship with others was measured by four questions. Three asked ‘When you were a child, how often did you feel lonely for not having friends, did you often have a group of friends that you felt comfortable spending time with, and how often were you picked on or bullied by kids in your neighbourhood?’ These were categorised as low

(not very often or never) and high (often or sometimes). The second question was reverse coded in the categorisation. The last question was ‘When you were a child, did you have a good friend?’ The answer was binary (0: no, 1: yes).

- (ix) Access to healthcare services was measured by vaccination deficiency and physician deficiency based on the question ‘Before or when you were 15 years old, did you receive any vaccinations?’ and ‘Have you always had a usual source of care, that is, a particular person or a place that you went to when you were sick or needed advice about your health?’
- (x) Healthy behaviour was measured based on the question ‘During your life, have you ever engaged in any of the following activities for at least a year?’ The list comprised increasing physical activity, changing diet, stopping smoking and reducing alcohol consumption.
- (xi) Mentorship was measured by support in three dimensions from family members and others based on the question ‘When you were a young adult, was there anyone who provided you with financial support for your work, such as starting a business; nonfinancial support or mentoring for your work, such as starting a business; or positive support or mentoring for your interpersonal relationships, such as marriage or a marriage-like relationship?’

Covariates

Demographic and lifestyle factors were derived from the CHARLS data and included as covariates. For demographic factors, we included gender (male, female), age group (<45, [45–60), [60–70), [70–80) and ≥ 80) and marital status (married, other). For lifestyle factors, we included tobacco consumption, alcohol consumption and the presence of any of 12 categories of chronic diseases.

- Tobacco consumption (0: no, 1: yes): ‘I would like to ask whether you have had the habit of smoking cigarettes/smoking a pipe/chewing tobacco, now or in the past. By smoking, we mean smoking more than 100 cigarettes in your life.’
- Alcohol consumption (0: no, 1: yes): ‘Did you drink any alcoholic beverages, such as beer, wine or liquor in the past year?’
- The presence of chronic disease (0: no, 1: yes) was derived from the question: ‘Have you been diagnosed with conditions listed below by a doctor?’ Possible answers included hypertension, dyslipidaemia, diabetes or high blood sugar, cancer or malignant tumour, chronic lung diseases, liver disease, heart attack (coronary heart disease, angina, congestive heart failure or other heart problems), stroke, kidney disease, stomach or other digestive diseases, psychiatric problems, memory-related disease, arthritis or rheumatism, and asthma.

Concentration index and decomposition

The standard concentration index is calculated as:

$$C(h|y) = \frac{2}{\mu} cov(h_i, R_i) = \frac{1}{n} \sum_{i=1}^n \frac{h_i}{\mu} (2R_i - 1) \quad (1)$$

where $C(h|y)$ is the concentration index, h_i is the intrinsic capacity indicator, μ is the mean value of the intrinsic capacity indicator and R is the fractional rank of family in the economic status distribution. The standard concentration index $C(h|y)$ ranges from $(1 - n)/n$, maximal pro-poor inequality (that is, all health is concentrated among the low-income groups), to $(n - 1)/n$, maximal pro-rich inequality (that is, all health is concentrated among the high-income groups).

The standard concentration index is not necessarily invariant to arbitrary retransformations of a cardinal variable, as in the case of intrinsic capacity indicators, which is standardised at the validation stage. This problem was addressed by using the modified concentration index ^[1,2]:

$$MC(h|y) = \frac{2}{\mu - h^{min}} cov(h_i, R_i) = \frac{1}{n} \sum_{i=1}^n \frac{h_i}{\mu - h^{min}} (2R_i - 1) \quad (2)$$

where h^{min} is the lower limit of h_i , and the index ranges between $(1 - n)/n$ and $(n - 1)/n$. The positive value indicates that the higher intrinsic capacity is more concentrated among the rich and vice versa. The larger the absolute value of the concentration index, the greater the inequality in the intrinsic capacity.

Additionally, the decomposition of the concentration index enables us to quantify each determinant's specific contribution while controlling for other determinants ^[3]. By calculating the concentration index of our regression models, the decomposition of the concentration index could be specified as:

$$CI = \sum_i (\beta_i^m \bar{x}_i / (\mu - h^{min})) C_i + \sum_j (\beta_j^m \bar{x}_j / (\mu - h^{min})) C_j + GC_\varepsilon / (\mu - h^{min}) \quad (3)$$

$(\beta_i^m \bar{x}_i / (\mu - h^{min})) C_i$ denotes the contribution of factors including socioeconomic, demographic and lifestyle factors, $(\beta_j^m \bar{x}_j / (\mu - h^{min})) C_j$ denotes the contribution of early-life factors and $GC_\varepsilon / (\mu - h^{min})$ denotes the contribution of ε . Specifically, μ is the mean value of the dependent variable, C_j is the modified concentration index of x_j , and \bar{x}_j is the mean of x_j . Thus, $\beta_j^m \bar{x}_j / (\mu - h^{min})$ denotes the elasticity of x_j .

References

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Table S1 Comparison between participants excluded and included in the sample

			Excluded	Included	<i>p</i> -value
Family economic status	1: poorest	No.	1779	4387	0.001
		%	22.07	20.14	
	2: poor	No.	1678	4539	
		%	20.82	20.84	
	3: average	No.	1633	4410	
		%	20.26	20.25	
	4: richer	No.	1552	4309	
		%	19.26	19.78	
Living in urban area	0: rural	No.	6213	15455	0.287
		%	71.56	70.95	
	1: urban	No.	2469	6328	
		%	28.44	29.05	
Education level	0: illiterate	No.	2966	5385	<0.001
		%	34.15	24.72	
	1: primary	No.	3417	8911	
		%	39.34	40.91	
	2: middle school	No.	1526	4773	
		%	17.57	21.91	
	3: high school	No.	732	2586	
		%	8.43	11.87	
	4: college and above	No.	44	128	
		%	0.51	0.59	
Having urban hukou	0: agriculture	No.	7121	17194	<0.001
		%	82.13	78.93	
	1: non-agriculture	No.	1549	4589	
		%	17.87	21.07	
Age group	0: age <45	No.	210	385	<0.001
		%	2.47	1.77	
	1: age 45–60	No.	4414	11401	
		%	51.93	52.34	
	2: age 60–70	No.	2035	6951	
		%	23.94	31.91	
	3: age 70–80	No.	1339	2674	
		%	15.75	12.28	
	4: age ≥80	No.	502	372	
		%	5.91	1.71	

Marital status	0: married	No.	6681	18310	<0.001
		%	76.92	84.06	
	1: single	No.	2005	3473	
		%	23.08	15.94	
Gender	0: female	No.	4934	11183	<0.001
		%	56.78	51.34	
	1: male	No.	3756	10600	
		%	43.22	48.66	
Tobacco consumption	0: No	No.	5858	13875	<0.001
		%	67.59	63.7	
	1: Yes	No.	2809	7908	
		%	32.41	36.3	
Alcohol consumption	0: No	No.	6060	14105	<0.001
		%	70.2	64.75	
	1: Yes	No.	2573	7678	
		%	29.8	35.25	
Presence of chronic diseases	0: No	No.	3060	7285	0.005
		%	35.14	33.44	
	1: Yes	No.	5649	14498	
		%	64.86	66.56	

Note: *p*-values were calculated from chi-squared tests.

Table S2 Bivariate association between early-life factors and IC

	Intrinsic Capacity		Locomotor		Cognitive		Vitality		Sensory		Psychological	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Mother literate												
0: No ^ϕ	-0.004	0.438	0.050	1.233	-0.012	0.752	0.010	0.459	-0.015	0.422	-0.004	1.444
1: Yes	0.238	0.399	0.211	0.904	0.383	0.635	0.136	0.526	0.126	0.440	0.109	1.398
p-value	<0.001		<0.001		<0.001		<0.001		<0.001		<0.001	
Father literate												
0: No ^ϕ	-0.046	0.440	0.022	1.283	-0.093	0.760	-0.009	0.453	-0.029	0.421	-0.034	1.455
1: Yes	0.118	0.423	0.133	1.075	0.206	0.701	0.071	0.484	0.042	0.429	0.067	1.414
p-value	<0.001		<0.001		<0.001		<0.001		<0.001		<0.001	
Health status before 15												
Better ^ϕ	0.084	0.434	0.080	1.190	0.098	0.728	0.061	0.480	0.058	0.446	0.110	1.417
Average	0.005	0.438	0.072	1.188	0.011	0.756	0.016	0.461	-0.023	0.410	0.007	1.436
Worse	-0.088	0.440	0.016	1.292	-0.075	0.773	-0.050	0.449	-0.072	0.409	-0.283	1.479
p-value	<0.001		0.049		<0.001		<0.001		<0.001		<0.001	
Severe illness before 16												
0: No ^ϕ	0.029	0.438	0.073	1.192	0.040	0.748	0.026	0.468	0.004	0.426	0.024	1.434
1: Yes	-0.086	0.467	-0.015	1.354	-0.099	0.784	-0.014	0.471	-0.062	0.418	-0.250	1.497
p-value	<0.001		0.012		<0.001		0.003		<0.001		<0.001	
Severe illness after 16												
0: No ^ϕ	0.040	0.435	0.107	1.109	0.045	0.748	0.034	0.468	0.012	0.425	0.056	1.424
1: Yes	-0.068	0.458	-0.133	1.579	-0.036	0.761	-0.024	0.464	-0.057	0.424	-0.235	1.494
p-value	<0.001		<0.001		<0.001		<0.001		<0.001		<0.001	
Vaccination deficiency												
0: No ^ϕ	0.053	0.436	0.087	1.170	0.084	0.736	0.046	0.471	0.011	0.427	0.026	1.432
1: Yes	-0.153	0.425	-0.041	1.368	-0.272	0.760	-0.101	0.433	-0.060	0.414	-0.097	1.479
p-value	<0.001		<0.001		<0.001		<0.001		<0.001		<0.001	
Physician deficiency												
0: No ^ϕ	0.039	0.437	0.079	1.190	0.057	0.745	0.034	0.467	0.010	0.427	0.027	1.434
1: Yes	-0.126	0.438	-0.024	1.299	-0.185	0.765	-0.058	0.468	-0.080	0.408	-0.157	1.474
p-value	<0.001		<0.001		<0.001		<0.001		<0.001		<0.001	
Healthy activity												

0: No ^ϕ	-0.029	0.440	0.059	1.210	-0.061	0.758	-0.016	0.458	-0.013	0.423	-0.032	1.457
1: Yes	0.119	0.425	0.085	1.187	0.208	0.703	0.101	0.477	0.025	0.429	0.085	1.402
p-value	<0.001		0.136		<0.001		<0.001		<0.001		<0.001	
Starvation												
0: Most slight ^ϕ	0.078	0.447	0.048	1.275	0.109	0.750	0.017	0.469	0.061	0.440	0.135	1.410
1	0.031	0.429	0.078	1.149	0.057	0.740	0.034	0.479	-0.006	0.418	0.000	1.433
2	0.046	0.415	0.119	1.087	0.085	0.716	0.065	0.457	-0.018	0.411	0.013	1.423
3: Most severe	-0.095	0.449	0.038	1.270	-0.170	0.763	-0.016	0.454	-0.063	0.418	-0.167	1.487
p-value	<0.001		0.010		<0.001		<0.001		<0.001		<0.001	
Famine												
0: No ^ϕ	0.048	0.440	0.048	1.262	0.049	0.770	-0.012	0.432	0.060	0.440	0.091	1.440
1: Yes	0.017	0.440	0.072	1.189	0.028	0.746	0.032	0.475	-0.012	0.422	-0.010	1.439
p-value	<0.001		0.256		0.109		<0.001		<0.001		<0.001	
Famine death in family												
0: No ^ϕ	0.037	0.438	0.068	1.206	0.053	0.747	0.028	0.468	0.010	0.427	0.035	1.431
1: Yes	-0.095	0.440	0.068	1.166	-0.142	0.758	-0.008	0.465	-0.076	0.408	-0.207	1.486
p-value	<0.001		0.986		<0.001		<0.001		<0.001		<0.001	
Childhood family socioeconomic status												
1: Worse ^ϕ	-0.039	0.440	0.045	1.262	-0.060	0.759	0.010	0.458	-0.039	0.419	-0.105	1.460
2: Average	0.050	0.437	0.084	1.167	0.070	0.739	0.038	0.470	0.014	0.426	0.068	1.428
3: Better	0.109	0.432	0.069	1.146	0.186	0.740	0.007	0.496	0.079	0.434	0.121	1.392
p-value	<0.001		0.077		<0.001		<0.001		<0.001		<0.001	
Community adversity												
0: Lowest ^ϕ	0.054	0.430	0.090	1.168	0.084	0.739	0.029	0.455	0.023	0.428	0.057	1.426
1	0.019	0.446	0.062	1.198	0.026	0.749	0.043	0.493	-0.015	0.421	-0.017	1.443
2	-0.098	0.435	0.032	1.249	-0.177	0.761	-0.034	0.445	-0.055	0.418	-0.122	1.471
3: Highest	-0.233	0.448	-0.177	1.659	-0.350	0.757	-0.145	0.415	-0.102	0.428	-0.275	1.498
p-value	<0.001		<0.001		<0.001		<0.001		<0.001		<0.001	
Friendship deficiency												
0: Lowest ^ϕ	0.087	0.423	0.108	1.111	0.138	0.723	0.054	0.459	0.031	0.427	0.082	1.419
1	-0.069	0.447	-0.005	1.361	-0.121	0.763	-0.021	0.485	-0.042	0.418	-0.062	1.453
2	-0.150	0.440	0.017	1.268	-0.246	0.752	-0.053	0.464	-0.081	0.409	-0.275	1.491
3: Highest	-0.214	0.432	-0.005	1.292	-0.300	0.754	-0.039	0.416	-0.124	0.447	-0.505	1.471
p-value	<0.001		<0.001		<0.001		<0.001		<0.001		<0.001	

Mother mental health problem												
0: No ^ϕ	0.058	0.436	0.074	1.192	0.082	0.742	0.034	0.463	0.020	0.430	0.100	1.413
1: Yes	-0.058	0.439	0.055	1.225	-0.080	0.757	0.002	0.479	-0.044	0.413	-0.198	1.475
p-value	<0.001		0.278		<0.001		<0.001		<0.001		<0.001	
Father mental health problem												
0: No ^ϕ	0.051	0.436	0.076	1.181	0.075	0.742	0.032	0.464	0.016	0.428	0.072	1.421
1: Yes	-0.078	0.441	0.041	1.272	-0.116	0.762	-0.004	0.481	-0.054	0.413	-0.210	1.479
p-value	<0.001		0.075		<0.001		<0.001		<0.001		<0.001	
Domestic violence												
0: Lowest ^ϕ	0.014	0.438	0.056	1.225	0.021	0.754	0.001	0.450	0.005	0.428	0.040	1.432
1	0.022	0.446	0.067	1.209	0.044	0.754	0.037	0.460	-0.011	0.425	-0.064	1.452
2	0.064	0.442	0.123	1.063	0.079	0.734	0.123	0.567	-0.010	0.413	-0.056	1.455
3: Highest	0.053	0.444	0.159	1.067	0.032	0.706	0.147	0.427	0.012	0.441	-0.081	1.440
p-value	<0.001		0.024		0.003		<0.001		0.096		<0.001	
Mentorship support												
0: No ^ϕ	-0.009	0.441	0.041	1.258	-0.018	0.757	-0.004	0.455	-0.014	0.425	-0.002	1.448
1: Yes	0.117	0.426	0.150	1.013	0.180	0.709	0.109	0.495	0.043	0.425	0.039	1.413
p-value	<0.001		<0.001		<0.001		<0.001		<0.001		0.065	

Note: SD denotes standard deviation; p-values were calculated using analysis of variance (ANOVA); ^ϕ denotes reference group in regression models.

Table S3 Multivariate association of early-life factors and IC

	(1)		(2)		(3)		(4)		(5)		(6)	
	Intrinsic capacity		Locomotor		Cognitive		Vitality		Sensory		Psychological	
	dy/dx	(95% CI)	dy/dx	(95% CI)	dy/dx	(95% CI)	dy/dx	(95% CI)	dy/dx	(95% CI)	dy/dx	(95% CI)
Mother literate	0.134***	(0.113, 0.155)	0.104***	(0.059, 0.149)	0.204***	(0.170, 0.238)	0.076***	(0.050, 0.102)	0.088***	(0.066, 0.110)	0.011	(-0.062, 0.083)
Father literate	0.092***	(0.078, 0.107)	0.072***	(0.036, 0.107)	0.186***	(0.162, 0.210)	0.043***	(0.028, 0.059)	0.030***	(0.017, 0.044)	0.051**	(0.004, 0.097)
Childhood health												
Average	-0.055***	(-0.069, -0.040)	0.004	(-0.033, 0.041)	-0.045***	(-0.069, -0.021)	-0.036***	(-0.051, -0.020)	-0.068***	(-0.082, -0.054)	-0.077***	(-0.124, -0.029)
Worse	-0.101***	(-0.124, -0.079)	-0.019	(-0.079, 0.041)	-0.066***	(-0.104, -0.028)	-0.089***	(-0.113, -0.065)	-0.091***	(-0.113, -0.070)	-0.267***	(-0.342, -0.192)
Severe illness before 16	-0.033**	(-0.063, -0.002)	-0.041	(-0.119, 0.037)	-0.045*	(-0.095, 0.006)	-0.008	(-0.040, 0.023)	-0.008	(-0.035, 0.018)	-0.067	(-0.168, 0.034)
Severe illness after 16	-0.088***	(-0.106, -0.069)	-0.237***	(-0.296, -0.179)	-0.060***	(-0.091, -0.029)	-0.059***	(-0.078, -0.040)	-0.051***	(-0.068, -0.034)	-0.229***	(-0.290, -0.167)
Vaccine deficiency	-0.140***	(-0.159, -0.122)	-0.087***	(-0.140, -0.033)	-0.244***	(-0.278, -0.211)	-0.104***	(-0.123, -0.084)	-0.045***	(-0.063, -0.027)	-0.074**	(-0.139, -0.010)
Physician deficiency	-0.090***	(-0.113, -0.068)	-0.056*	(-0.117, 0.004)	-0.123***	(-0.162, -0.085)	-0.050***	(-0.074, -0.026)	-0.052***	(-0.073, -0.032)	-0.101***	(-0.175, -0.028)
Healthy activity	0.118***	(0.104, 0.132)	0.012	(-0.023, 0.047)	0.217***	(0.194, 0.241)	0.097***	(0.082, 0.112)	0.024***	(0.011, 0.038)	0.113***	(0.067, 0.159)
Starvation												
1	-0.009	(-0.027, 0.008)	0.052**	(0.007, 0.097)	-0.004	(-0.034, 0.026)	0.017*	(-0.003, 0.036)	-0.032***	(-0.049, -0.014)	-0.071**	(-0.129, -0.013)
2	0.022**	(0.000, 0.043)	0.100***	(0.045, 0.154)	0.048***	(0.012, 0.084)	0.051***	(0.027, 0.074)	-0.033***	(-0.054, -0.013)	-0.027	(-0.098, 0.043)
3	-0.072***	(-0.094, -0.050)	0.043	(-0.014, 0.100)	-0.133***	(-0.170, -0.096)	-0.005	(-0.028, 0.017)	-0.057***	(-0.078, -0.037)	-0.148***	(-0.219, -0.077)
Famine	0.019**	(0.001, 0.038)	0.016	(-0.036, 0.068)	0.052***	(0.020, 0.084)	0.043***	(0.023, 0.062)	-0.025***	(-0.044, -0.007)	0.016	(-0.046, 0.078)
Famine death in family	-0.073***	(-0.094, -0.051)	0.023	(-0.030, 0.077)	-0.108***	(-0.145, -0.072)	-0.026**	(-0.049, -0.002)	-0.045***	(-0.065, -0.025)	-0.129***	(-0.204, -0.055)
Family SES in childhood												
2	0.018**	(0.003, 0.033)	0.014	(-0.025, 0.053)	0.024*	(-0.001, 0.050)	0.003	(-0.013, 0.020)	0.011	(-0.003, 0.026)	0.043*	(-0.006, 0.093)
3	0.012	(-0.012, 0.036)	-0.023	(-0.085, 0.039)	0.036*	(-0.006, 0.078)	-0.057***	(-0.085, -0.029)	0.032***	(0.008, 0.057)	0.050	(-0.031, 0.131)
Neighbourhood quality												
1	-0.000	(-0.015, 0.015)	-0.017	(-0.055, 0.021)	-0.008	(-0.032, 0.017)	0.022***	(0.006, 0.038)	-0.013*	(-0.027, 0.001)	-0.005	(-0.053, 0.043)
2	-0.056***	(-0.082, -0.029)	-0.017	(-0.083, 0.049)	-0.116***	(-0.161, -0.070)	-0.027*	(-0.054, 0.000)	-0.020	(-0.045, 0.004)	-0.017	(-0.104, 0.069)
3	-0.113***	(-0.158, -0.067)	-0.198**	(-0.351, -0.046)	-0.161***	(-0.235, -0.088)	-0.101***	(-0.142, -0.060)	-0.032	(-0.072, 0.007)	-0.058	(-0.192, 0.075)
Friendship deficiency												
1	-0.093***	(-0.109, -0.078)	-0.084***	(-0.126, -0.042)	-0.161***	(-0.188, -0.135)	-0.046***	(-0.063, -0.029)	-0.039***	(-0.054, -0.025)	-0.057**	(-0.109, -0.006)
2	-0.139***	(-0.167, -0.112)	-0.044	(-0.117, 0.030)	-0.238***	(-0.285, -0.192)	-0.071***	(-0.101, -0.041)	-0.056***	(-0.081, -0.031)	-0.184***	(-0.276, -0.093)
3	-0.151***	(-0.216, -0.087)	-0.040	(-0.205, 0.126)	-0.215***	(-0.326, -0.104)	-0.032	(-0.091, 0.026)	-0.075**	(-0.135, -0.014)	-0.304***	(-0.503, -0.105)
Mother mental health problem	-0.032***	(-0.052, -0.012)	0.018	(-0.029, 0.065)	-0.032*	(-0.066, 0.001)	-0.013	(-0.035, 0.009)	-0.012	(-0.031, 0.006)	-0.150***	(-0.217, -0.083)
Father mental health problem	-0.049***	(-0.071, -0.027)	-0.020	(-0.074, 0.034)	-0.084***	(-0.121, -0.047)	-0.016	(-0.040, 0.007)	-0.020*	(-0.041, 0.001)	-0.064*	(-0.137, 0.009)
Domestic violence												

1	0.017*	(-0.001, 0.035)	0.015	(-0.031, 0.061)	0.028*	(-0.002, 0.058)	0.034***	(0.015, 0.054)	-0.008	(-0.025, 0.009)	-0.056*	(-0.116, 0.003)
2	0.070***	(0.049, 0.091)	0.068***	(0.018, 0.118)	0.085***	(0.051, 0.120)	0.122***	(0.095, 0.148)	0.000	(-0.019, 0.020)	-0.036	(-0.107, 0.035)
3	0.077***	(0.031, 0.123)	0.107*	(-0.003, 0.216)	0.064*	(-0.009, 0.137)	0.151***	(0.106, 0.195)	0.034	(-0.010, 0.078)	-0.023	(-0.174, 0.127)
Mentorship support	0.084***	(0.069, 0.099)	0.091***	(0.056, 0.126)	0.121***	(0.095, 0.146)	0.084***	(0.067, 0.102)	0.039***	(0.024, 0.054)	0.032	(-0.018, 0.082)

Note: for the categorical variables, 0 denotes the lowest level, and 3 denotes the highest level.

Table S4 Current socioeconomic, demographic and lifestyle factors and IC

	Intrinsic Capacity		Locomotor		Cognitive		Vitality		Sensory		Psychological	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Family economic status												
0: Poorest ^ϕ	-0.103	0.432	-0.010	1.344	-0.196	0.755	-0.052	0.452	-0.055	0.415	-0.013	1.444
1: Poor	-0.015	0.434	0.100	1.105	-0.045	0.746	0.020	0.478	-0.029	0.414	-0.013	1.453
2: Average	0.033	0.434	0.099	1.122	0.033	0.748	0.045	0.457	0.003	0.425	0.021	1.431
3: Richer	0.065	0.430	0.078	1.217	0.117	0.715	0.050	0.476	0.017	0.426	0.021	1.438
4: Richest	0.140	0.436	0.072	1.210	0.268	0.705	0.061	0.469	0.071	0.440	0.027	1.430
p-value	<0.001		<0.001		<0.001		<0.001		<0.001		0.503	
Living in an urban area												
0: No ^ϕ	-0.034	0.439	0.061	1.222	-0.088	0.750	0.011	0.463	-0.027	0.420	-0.008	1.445
1: Yes	0.159	0.414	0.086	1.152	0.324	0.666	0.056	0.478	0.066	0.433	0.049	1.426
p-value	<0.001		0.163		<0.001		<0.001		<0.001		<0.001	
Age group												
Age <45 ^ϕ	0.166	0.414	0.277	0.527	0.172	0.748	0.018	0.368	0.231	0.457	0.063	1.388
Age 45–60	0.129	0.408	0.198	0.887	0.157	0.699	0.124	0.477	0.054	0.425	0.044	1.418
Age 60–70	-0.044	0.426	0.048	1.197	-0.035	0.761	-0.032	0.428	-0.054	0.409	-0.021	1.457
Age 70–80	-0.211	0.442	-0.283	1.758	-0.263	0.785	-0.203	0.415	-0.098	0.423	-0.044	1.472
Age ≥80	-0.465	0.473	-1.232	2.846	-0.594	0.777	-0.360	0.426	-0.150	0.429	-0.231	1.530
p-value	<0.001		<0.001		<0.001		<0.001		<0.001		<0.001	
Urban <i>hukou</i>												
0: No ^ϕ	-0.031	0.437	0.063	1.202	-0.077	0.746	0.008	0.466	-0.022	0.422	-0.016	1.447
1: Yes	0.221	0.394	0.085	1.202	0.438	0.615	0.084	0.472	0.086	0.431	0.100	1.409
p-value	<0.001		0.288		<0.001		<0.001		<0.001		<0.001	
Education level												
0: Illiterate ^ϕ	-0.328	0.394	-0.157	1.576	-0.649	0.661	-0.201	0.394	-0.084	0.424	-0.200	1.492
1: Primary school	0.014	0.381	0.105	1.089	0.053	0.652	0.021	0.444	-0.029	0.408	-0.007	1.447
2: Middle school	0.237	0.353	0.184	0.962	0.424	0.529	0.174	0.472	0.067	0.426	0.129	1.389
3: High school	0.360	0.331	0.193	0.995	0.613	0.480	0.222	0.485	0.144	0.432	0.251	1.338
4: College and above	0.458	0.345	0.110	1.158	0.799	0.396	0.132	0.441	0.228	0.456	0.392	1.201
p-value	<0.001		<0.001		<0.001		<0.001		<0.001		<0.001	
Marital status												
0: Married ^ϕ	0.053	0.434	0.098	1.152	0.073	0.741	0.050	0.473	0.008	0.426	0.050	1.434

1: Others	-0.137	0.438	-0.089	1.427	-0.188	0.764	-0.113	0.417	-0.042	0.421	-0.210	1.446
p-value	<0.001		<0.001		<0.001		<0.001		<0.001		<0.001	
Gender												
0: Female ^ϕ	-0.129	0.423	0.017	1.265	-0.127	0.790	-0.197	0.335	-0.038	0.421	-0.194	1.482
1: Male	0.182	0.401	0.121	1.130	0.199	0.667	0.257	0.476	0.041	0.427	0.221	1.361
p-value	<0.001		<0.001		<0.001		<0.001		<0.001		<0.001	
Tobacco consumption												
0: No ^ϕ	-0.038	0.444	0.040	1.256	-0.024	0.778	-0.078	0.424	-0.012	0.426	-0.072	1.462
1: Yes	0.127	0.414	0.117	1.100	0.129	0.688	0.203	0.488	0.022	0.425	0.149	1.387
p-value	<0.001		<0.001		<0.001		<0.001		<0.001		<0.001	
Alcohol consumption												
0: No ^ϕ	-0.049	0.435	0.018	1.281	-0.040	0.764	-0.075	0.427	-0.026	0.421	-0.070	1.461
1: Yes	0.154	0.420	0.159	1.036	0.164	0.707	0.207	0.486	0.049	0.430	0.152	1.387
p-value	<0.001		<0.001		<0.001		<0.001		<0.001		<0.001	
Chronic diseases												
0: No ^ϕ	0.122	0.421	0.172	0.933	0.093	0.744	0.083	0.463	0.100	0.433	0.277	1.332
1: Yes	-0.028	0.441	0.016	1.314	0.001	0.752	-0.005	0.468	-0.050	0.413	-0.127	1.472
p-value	<0.001		<0.001		<0.001		<0.001		<0.001		<0.001	

Note: SD denotes standard deviation; p-values were calculated using analysis of variance (ANOVA); ^ϕ denotes reference group in regression models.

Table S5 Association of life-course factors and IC

	(1)		(2)		(3)		(4)		(5)		(6)	
	Intrinsic capacity		Locomotor		Cognitive		Vitality		Sensory		Psychological	
	dy/dx	(95% CI)	dy/dx	(95% CI)	dy/dx	(95% CI)	dy/dx	(95% CI)	dy/dx	(95% CI)	dy/dx	(95% CI)
Family economic status												
Poorer	0.032***	(0.017, 0.047)	0.060**	(0.006, 0.113)	0.055***	(0.028, 0.081)	0.032***	(0.016, 0.049)	0.013	(-0.005, 0.030)	-0.035	(-0.095, 0.025)
Average	0.044***	(0.029, 0.059)	0.033	(-0.021, 0.086)	0.064***	(0.037, 0.091)	0.037***	(0.020, 0.053)	0.032***	(0.014, 0.050)	-0.006	(-0.067, 0.055)
Richer	0.048***	(0.032, 0.063)	0.007	(-0.049, 0.063)	0.087***	(0.059, 0.114)	0.037***	(0.020, 0.054)	0.032***	(0.014, 0.050)	-0.017	(-0.080, 0.045)
Richest	0.066***	(0.049, 0.082)	-0.003	(-0.065, 0.058)	0.124***	(0.095, 0.152)	0.037***	(0.019, 0.055)	0.053***	(0.034, 0.073)	-0.030	(-0.095, 0.036)
Mother literate	0.027***	(0.009, 0.044)	0.040*	(-0.005, 0.084)	0.007	(-0.021, 0.035)	0.020*	(-0.002, 0.042)	0.040***	(0.019, 0.061)	-0.010	(-0.083, 0.063)
Father literate	0.040***	(0.029, 0.051)	0.035**	(0.001, 0.069)	0.077***	(0.057, 0.096)	0.024***	(0.011, 0.036)	0.012*	(-0.001, 0.025)	0.043*	(-0.003, 0.089)
Childhood health												
Average	-0.043***	(-0.054, -0.032)	-0.003	(-0.038, 0.032)	-0.026***	(-0.045, -0.007)	-0.031***	(-0.044, -0.019)	-0.061***	(-0.074, -0.047)	-0.059**	(-0.106, -0.012)
Worse	-0.082***	(-0.099, -0.065)	-0.032	(-0.090, 0.027)	-0.046***	(-0.076, -0.016)	-0.074***	(-0.093, -0.055)	-0.077***	(-0.098, -0.057)	-0.218***	(-0.291, -0.145)
Severe illness before 16	-0.022*	(-0.046, 0.001)	-0.031	(-0.106, 0.043)	-0.021	(-0.062, 0.019)	-0.006	(-0.030, 0.018)	-0.008	(-0.033, 0.017)	-0.061	(-0.158, 0.035)
Severe illness after 16	-0.064***	(-0.079, -0.050)	-0.201***	(-0.258, -0.144)	-0.034***	(-0.059, -0.010)	-0.046***	(-0.062, -0.030)	-0.035***	(-0.052, -0.019)	-0.199***	(-0.258, -0.139)
Vaccine deficiency	-0.027***	(-0.042, -0.012)	0.014	(-0.037, 0.065)	-0.063***	(-0.090, -0.035)	-0.019**	(-0.035, -0.004)	-0.006	(-0.023, 0.011)	-0.008	(-0.072, 0.057)
Physician deficiency	-0.030***	(-0.048, -0.012)	0.026	(-0.033, 0.084)	-0.026	(-0.057, 0.005)	-0.005	(-0.024, 0.014)	-0.038***	(-0.058, -0.018)	-0.069*	(-0.143, 0.004)
Healthy activity	0.027***	(0.016, 0.039)	0.018	(-0.018, 0.053)	0.064***	(0.044, 0.084)	0.010	(-0.003, 0.023)	0.006	(-0.008, 0.019)	0.041*	(-0.005, 0.088)
Starvation												
1	-0.006	(-0.020, 0.007)	0.031	(-0.014, 0.076)	0.016	(-0.008, 0.040)	0.000	(-0.016, 0.016)	-0.021**	(-0.038, -0.005)	-0.088***	(-0.145, -0.030)
2	0.007	(-0.009, 0.024)	0.038	(-0.015, 0.091)	0.049***	(0.019, 0.078)	0.009	(-0.010, 0.028)	-0.024**	(-0.044, -0.004)	-0.042	(-0.111, 0.028)
3	-0.033***	(-0.050, -0.016)	0.019	(-0.037, 0.076)	-0.030**	(-0.059, -0.000)	-0.010	(-0.028, 0.008)	-0.035***	(-0.054, -0.015)	-0.153***	(-0.224, -0.082)
Famine	0.020***	(0.006, 0.035)	0.036	(-0.014, 0.087)	0.047***	(0.022, 0.072)	0.031***	(0.016, 0.047)	-0.012	(-0.030, 0.006)	0.006	(-0.055, 0.068)
Famine death in family	-0.008	(-0.025, 0.009)	0.047*	(-0.006, 0.100)	-0.008	(-0.038, 0.021)	0.013	(-0.005, 0.032)	-0.009	(-0.028, 0.010)	-0.094**	(-0.169, -0.020)
Family SES in childhood												
2	0.010*	(-0.001, 0.022)	0.012	(-0.025, 0.049)	0.006	(-0.014, 0.026)	0.005	(-0.008, 0.018)	0.008	(-0.005, 0.021)	0.033	(-0.015, 0.081)
3	0.007	(-0.012, 0.025)	0.003	(-0.057, 0.064)	-0.019	(-0.051, 0.014)	-0.017	(-0.039, 0.005)	0.024**	(0.001, 0.047)	0.075*	(-0.005, 0.155)
Neighbourhood quality												
1	-0.012**	(-0.023, -0.000)	-0.020	(-0.056, 0.017)	-0.013	(-0.032, 0.007)	0.003	(-0.010, 0.016)	-0.018***	(-0.031, -0.004)	-0.026	(-0.074, 0.021)
2	-0.039***	(-0.059, -0.020)	0.004	(-0.059, 0.067)	-0.075***	(-0.111, -0.038)	-0.021**	(-0.043, -0.000)	-0.020*	(-0.043, 0.003)	-0.024	(-0.108, 0.060)
3	-0.056***	(-0.092, -0.019)	-0.111	(-0.255, 0.032)	-0.056*	(-0.115, 0.002)	-0.048***	(-0.082, -0.015)	-0.027	(-0.065, 0.011)	-0.052	(-0.181, 0.077)
Friendship deficiency												
1	-0.045***	(-0.057, -0.033)	-0.057***	(-0.096, -0.017)	-0.061***	(-0.082, -0.040)	-0.024***	(-0.038, -0.011)	-0.027***	(-0.040, -0.013)	-0.049*	(-0.099, 0.001)

2	-0.073***	(-0.094, -0.053)	-0.016	(-0.087, 0.056)	-0.118***	(-0.156, -0.081)	-0.027**	(-0.050, -0.003)	-0.037***	(-0.061, -0.013)	-0.151***	(-0.240, -0.062)
3	-0.109***	(-0.159, -0.059)	-0.031	(-0.186, 0.123)	-0.105**	(-0.190, -0.019)	-0.028	(-0.072, 0.017)	-0.064**	(-0.121, -0.007)	-0.321***	(-0.511, -0.131)
Mother mental health problem	-0.004	(-0.020, 0.011)	0.021	(-0.024, 0.067)	-0.003	(-0.030, 0.023)	0.018**	(0.001, 0.034)	0.001	(-0.017, 0.019)	-0.107***	(-0.173, -0.041)
Father mental health problem	-0.038***	(-0.055, -0.021)	-0.026	(-0.079, 0.026)	-0.045***	(-0.075, -0.016)	-0.023**	(-0.041, -0.005)	-0.020**	(-0.040, -0.000)	-0.062*	(-0.133, 0.009)
Domestic violence												
1	0.003	(-0.011, 0.017)	-0.007	(-0.052, 0.038)	0.005	(-0.018, 0.029)	0.014*	(-0.001, 0.029)	-0.007	(-0.024, 0.009)	-0.050*	(-0.109, 0.008)
2	0.001	(-0.016, 0.018)	0.012	(-0.038, 0.061)	0.018	(-0.010, 0.047)	0.018*	(-0.003, 0.040)	-0.019*	(-0.038, 0.000)	-0.109***	(-0.179, -0.039)
3	-0.009	(-0.045, 0.026)	0.016	(-0.091, 0.123)	-0.029	(-0.086, 0.028)	0.041**	(0.009, 0.074)	0.003	(-0.039, 0.045)	-0.080	(-0.229, 0.068)
Mentorship support	0.019***	(0.007, 0.031)	0.038**	(0.004, 0.073)	0.040***	(0.019, 0.060)	0.012*	(-0.002, 0.026)	0.011	(-0.003, 0.026)	-0.014	(-0.064, 0.035)
Tobacco consumption	-0.027***	(-0.040, -0.014)	0.017	(-0.029, 0.063)	-0.040***	(-0.062, -0.018)	-0.009	(-0.024, 0.007)	-0.016**	(-0.032, -0.001)	-0.053*	(-0.107, 0.001)
Alcohol consumption	0.025***	(0.014, 0.036)	0.053***	(0.016, 0.090)	0.006	(-0.013, 0.026)	0.046***	(0.033, 0.059)	0.024***	(0.010, 0.038)	-0.006	(-0.054, 0.041)
Chronic disease	-0.085***	(-0.096, -0.074)	-0.097***	(-0.127, -0.066)	-0.022**	(-0.041, -0.003)	-0.034***	(-0.046, -0.022)	-0.108***	(-0.121, -0.094)	-0.326***	(-0.371, -0.281)
Urban	0.048***	(0.034, 0.062)	0.001	(-0.047, 0.049)	0.093***	(0.069, 0.117)	0.019**	(0.002, 0.036)	0.027***	(0.010, 0.045)	-0.062**	(-0.119, -0.004)
Age group												
Age 45–60	-0.124***	(-0.159, -0.088)	-0.089***	(-0.148, -0.029)	-0.095***	(-0.157, -0.033)	-0.049***	(-0.084, -0.014)	-0.187***	(-0.233, -0.140)	-0.109	(-0.249, 0.032)
Age 60–70	-0.222***	(-0.259, -0.185)	-0.216***	(-0.284, -0.148)	-0.142***	(-0.206, -0.078)	-0.190***	(-0.227, -0.154)	-0.255***	(-0.303, -0.207)	-0.105	(-0.251, 0.040)
Age 70–80	-0.346***	(-0.386, -0.307)	-0.513***	(-0.606, -0.419)	-0.253***	(-0.321, -0.185)	-0.347***	(-0.385, -0.308)	-0.303***	(-0.353, -0.252)	-0.126	(-0.281, 0.029)
Age ≥80	-0.525***	(-0.585, -0.466)	-1.411***	(-1.714, -1.108)	-0.424***	(-0.516, -0.332)	-0.458***	(-0.520, -0.396)	-0.351***	(-0.418, -0.285)	-0.236**	(-0.460, -0.012)
Urban hukou	0.062***	(0.046, 0.079)	0.006	(-0.048, 0.061)	0.114***	(0.087, 0.142)	0.012	(-0.009, 0.032)	0.032***	(0.012, 0.052)	0.048	(-0.020, 0.116)
Education level												
Primary school	0.193***	(0.178, 0.208)	0.151***	(0.101, 0.201)	0.563***	(0.537, 0.590)	0.025***	(0.011, 0.040)	-0.004	(-0.020, 0.013)	0.025	(-0.036, 0.085)
Middle school	0.302***	(0.285, 0.320)	0.168***	(0.111, 0.226)	0.815***	(0.784, 0.846)	0.072***	(0.053, 0.091)	0.027**	(0.006, 0.047)	0.030	(-0.044, 0.103)
High school	0.361***	(0.339, 0.382)	0.182***	(0.113, 0.252)	0.897***	(0.860, 0.933)	0.086***	(0.060, 0.111)	0.065***	(0.039, 0.092)	0.119**	(0.028, 0.209)
College and above	0.412***	(0.353, 0.472)	0.183*	(-0.028, 0.394)	0.952***	(0.874, 1.030)	0.038	(-0.036, 0.111)	0.097**	(0.011, 0.182)	0.242**	(0.006, 0.478)
Marital status	-0.056***	(-0.070, -0.042)	-0.045*	(-0.095, 0.005)	-0.073***	(-0.097, -0.048)	-0.044***	(-0.058, -0.030)	-0.003	(-0.019, 0.013)	-0.165***	(-0.223, -0.108)
Gender	0.236***	(0.222, 0.250)	0.031	(-0.022, 0.083)	0.119***	(0.095, 0.144)	0.424***	(0.407, 0.440)	0.079***	(0.063, 0.096)	0.427***	(0.367, 0.487)

Note: for the categorical variables, 0 denotes the lowest level, and 3 denotes the highest level; province fixed effect and wave fixed effect were also controlled.

Table S6 Incidental truncation model

	(1)		(2)		(3)		(4)		(5)		(6)	
	Intrinsic capacity		Locomotor		Cognitive		Vitality		Sensory		Psychological	
	dy/dx	(95% CI)	dy/dx	(95% CI)	dy/dx	(95% CI)	dy/dx	(95% CI)	dy/dx	(95% CI)	dy/dx	(95% CI)
Family economic status												
Poorer	0.032***	(0.017, 0.047)	0.055**	(0.002, 0.109)	0.055***	(0.029, 0.082)	0.032***	(0.016, 0.048)	0.013	(-0.004, 0.031)	-0.035	(-0.095, 0.025)
Average	0.044***	(0.029, 0.059)	0.032	(-0.021, 0.085)	0.065***	(0.038, 0.091)	0.036***	(0.020, 0.052)	0.032***	(0.014, 0.050)	-0.006	(-0.067, 0.055)
Richer	0.048***	(0.033, 0.063)	0.007	(-0.049, 0.062)	0.088***	(0.061, 0.115)	0.037***	(0.020, 0.054)	0.033***	(0.015, 0.051)	-0.017	(-0.079, 0.045)
Richest	0.066***	(0.050, 0.082)	-0.004	(-0.066, 0.057)	0.125***	(0.097, 0.154)	0.037***	(0.019, 0.056)	0.054***	(0.034, 0.073)	-0.029	(-0.094, 0.036)
Mother literate	0.027***	(0.010, 0.044)	0.040*	(-0.005, 0.084)	0.008	(-0.020, 0.036)	0.019*	(-0.003, 0.041)	0.040***	(0.018, 0.061)	-0.010	(-0.083, 0.063)
Father literate	0.040***	(0.029, 0.051)	0.033*	(-0.001, 0.067)	0.077***	(0.058, 0.096)	0.023***	(0.011, 0.035)	0.012*	(-0.001, 0.025)	0.043*	(-0.003, 0.088)
Childhood health												
Average	-0.043***	(-0.054, -0.032)	-0.003	(-0.038, 0.032)	-0.027***	(-0.046, -0.008)	-0.031***	(-0.043, -0.019)	-0.060***	(-0.074, -0.047)	-0.059**	(-0.105, -0.012)
Worse	-0.082***	(-0.099, -0.065)	-0.031	(-0.089, 0.027)	-0.047***	(-0.077, -0.017)	-0.073***	(-0.092, -0.054)	-0.076***	(-0.097, -0.056)	-0.218***	(-0.291, -0.145)
Severe illness before 16	-0.023*	(-0.046, 0.001)	-0.029	(-0.103, 0.045)	-0.021	(-0.062, 0.019)	-0.007	(-0.031, 0.018)	-0.009	(-0.034, 0.016)	-0.062	(-0.159, 0.035)
Severe illness after 16	-0.064***	(-0.079, -0.050)	-0.203***	(-0.260, -0.146)	-0.035***	(-0.059, -0.010)	-0.046***	(-0.062, -0.030)	-0.035***	(-0.052, -0.019)	-0.199***	(-0.258, -0.139)
Vaccine deficiency	-0.027***	(-0.042, -0.012)	0.009	(-0.043, 0.061)	-0.064***	(-0.092, -0.037)	-0.020**	(-0.035, -0.004)	-0.006	(-0.023, 0.011)	-0.008	(-0.072, 0.057)
Physician deficiency	-0.029***	(-0.047, -0.012)	0.021	(-0.037, 0.080)	-0.025	(-0.056, 0.006)	-0.005	(-0.024, 0.014)	-0.039***	(-0.059, -0.019)	-0.068*	(-0.142, 0.005)
Healthy activity	0.028***	(0.016, 0.039)	0.018	(-0.018, 0.054)	0.065***	(0.045, 0.085)	0.011	(-0.002, 0.024)	0.006	(-0.007, 0.019)	0.042*	(-0.005, 0.089)
Starvation												
1	-0.006	(-0.020, 0.008)	0.029	(-0.016, 0.074)	0.014	(-0.010, 0.038)	-0.000	(-0.016, 0.016)	-0.021**	(-0.037, -0.005)	-0.087***	(-0.145, -0.030)
2	0.007	(-0.009, 0.024)	0.037	(-0.017, 0.090)	0.048***	(0.019, 0.078)	0.010	(-0.009, 0.028)	-0.024**	(-0.044, -0.004)	-0.042	(-0.111, 0.028)
3	-0.033***	(-0.050, -0.016)	0.018	(-0.039, 0.074)	-0.030**	(-0.059, -0.001)	-0.010	(-0.028, 0.008)	-0.034***	(-0.054, -0.015)	-0.153***	(-0.224, -0.081)
Famine	0.020***	(0.006, 0.035)	0.035	(-0.015, 0.086)	0.047***	(0.022, 0.072)	0.031***	(0.015, 0.046)	-0.013	(-0.031, 0.005)	0.006	(-0.055, 0.068)
Famine death in family	-0.008	(-0.025, 0.009)	0.047*	(-0.005, 0.100)	-0.009	(-0.038, 0.021)	0.013	(-0.006, 0.032)	-0.008	(-0.027, 0.011)	-0.094**	(-0.169, -0.020)
Family SES in childhood												
2	0.011*	(-0.001, 0.022)	0.009	(-0.028, 0.046)	0.005	(-0.015, 0.025)	0.005	(-0.008, 0.017)	0.007	(-0.006, 0.021)	0.033	(-0.015, 0.081)
3	0.007	(-0.012, 0.025)	0.002	(-0.058, 0.063)	-0.019	(-0.052, 0.013)	-0.017	(-0.040, 0.005)	0.024**	(0.000, 0.047)	0.075*	(-0.005, 0.155)
Neighbourhood quality												
1	-0.011*	(-0.023, 0.000)	-0.020	(-0.057, 0.017)	-0.012	(-0.031, 0.008)	0.004	(-0.009, 0.016)	-0.018***	(-0.031, -0.004)	-0.026	(-0.073, 0.021)
2	-0.039***	(-0.059, -0.020)	0.004	(-0.059, 0.067)	-0.072***	(-0.109, -0.035)	-0.021**	(-0.043, -0.000)	-0.020*	(-0.043, 0.003)	-0.023	(-0.107, 0.061)
3	-0.055***	(-0.091, -0.018)	-0.108	(-0.250, 0.034)	-0.054*	(-0.112, 0.004)	-0.048***	(-0.081, -0.015)	-0.024	(-0.062, 0.013)	-0.050	(-0.180, 0.079)
Friendship deficiency												
1	-0.045***	(-0.057, -0.033)	-0.058***	(-0.097, -0.018)	-0.061***	(-0.082, -0.041)	-0.024***	(-0.038, -0.011)	-0.027***	(-0.041, -0.013)	-0.049*	(-0.099, 0.001)

2	-0.073***	(-0.094, -0.053)	-0.015	(-0.086, 0.055)	-0.121***	(-0.158, -0.084)	-0.026**	(-0.049, -0.003)	-0.038***	(-0.062, -0.014)	-0.151***	(-0.240, -0.061)
3	-0.109***	(-0.160, -0.059)	-0.033	(-0.187, 0.122)	-0.104**	(-0.189, -0.019)	-0.030	(-0.074, 0.015)	-0.062**	(-0.120, -0.005)	-0.322***	(-0.512, -0.131)
Mother mental health problem	-0.005	(-0.020, 0.011)	0.022	(-0.024, 0.067)	-0.005	(-0.031, 0.022)	0.017**	(0.001, 0.034)	0.001	(-0.017, 0.019)	-0.108***	(-0.173, -0.042)
Father mental health problem	-0.038***	(-0.055, -0.021)	-0.028	(-0.081, 0.024)	-0.044***	(-0.074, -0.015)	-0.023**	(-0.041, -0.005)	-0.019*	(-0.039, 0.001)	-0.061*	(-0.133, 0.010)
Domestic violence												
1	0.003	(-0.011, 0.017)	-0.010	(-0.055, 0.035)	0.005	(-0.018, 0.029)	0.014*	(-0.001, 0.029)	-0.007	(-0.023, 0.009)	-0.050*	(-0.108, 0.008)
2	0.001	(-0.016, 0.018)	0.011	(-0.038, 0.061)	0.019	(-0.009, 0.048)	0.019*	(-0.003, 0.041)	-0.019*	(-0.038, 0.000)	-0.109***	(-0.179, -0.040)
3	-0.010	(-0.045, 0.026)	0.016	(-0.091, 0.123)	-0.029	(-0.086, 0.028)	0.041**	(0.008, 0.074)	0.003	(-0.039, 0.045)	-0.081	(-0.229, 0.067)
Mentorship support	0.019***	(0.007, 0.031)	0.038**	(0.004, 0.073)	0.040***	(0.020, 0.061)	0.012*	(-0.002, 0.026)	0.011	(-0.003, 0.026)	-0.014	(-0.064, 0.036)
Tobacco consumption	-0.027***	(-0.040, -0.014)	0.017	(-0.029, 0.063)	-0.041***	(-0.063, -0.019)	-0.009	(-0.025, 0.007)	-0.017**	(-0.032, -0.001)	-0.053*	(-0.107, 0.000)
Alcohol consumption	0.025***	(0.013, 0.036)	0.054***	(0.017, 0.091)	0.006	(-0.014, 0.026)	0.046***	(0.033, 0.059)	0.024***	(0.010, 0.037)	-0.006	(-0.054, 0.041)
Chronic disease	-0.085***	(-0.096, -0.074)	-0.096***	(-0.127, -0.066)	-0.022**	(-0.041, -0.003)	-0.035***	(-0.047, -0.023)	-0.108***	(-0.121, -0.094)	-0.326***	(-0.371, -0.281)
Urban	-0.104**	(-0.206, -0.002)	0.263	(-0.256, 0.782)	-0.127	(-0.294, 0.041)	-0.120**	(-0.226, -0.013)	-0.052	(-0.163, 0.059)	-0.351*	(-0.760, 0.059)
Age group												
Age 45–60	0.015	(-0.083, 0.113)	-0.326	(-0.805, 0.153)	0.100	(-0.064, 0.264)	0.076	(-0.024, 0.177)	-0.114**	(-0.223, -0.005)	0.153	(-0.239, 0.545)
Age 60–70	0.079	(-0.125, 0.282)	-0.733	(-1.770, 0.305)	0.287*	(-0.049, 0.624)	0.084	(-0.126, 0.293)	-0.098	(-0.320, 0.123)	0.466	(-0.348, 1.280)
Age 70–80	-0.237***	(-0.319, -0.155)	-0.703***	(-1.087, -0.318)	-0.100	(-0.238, 0.038)	-0.247***	(-0.331, -0.163)	-0.245***	(-0.338, -0.153)	0.082	(-0.248, 0.411)
Age ≥80	-0.903***	(-1.169, -0.637)	-0.751	(-2.107, 0.606)	-0.972***	(-1.395, -0.549)	-0.802***	(-1.073, -0.530)	-0.541***	(-0.822, -0.261)	-0.952*	(-1.985, 0.081)
Urban hukou	0.026*	(-0.003, 0.055)	0.069	(-0.066, 0.205)	0.063**	(0.014, 0.111)	-0.021	(-0.054, 0.011)	0.013	(-0.021, 0.046)	-0.021	(-0.139, 0.097)
Education level												
Primary school	0.270***	(0.217, 0.324)	0.016	(-0.250, 0.282)	0.674***	(0.586, 0.762)	0.095***	(0.041, 0.149)	0.037	(-0.021, 0.095)	0.171	(-0.043, 0.385)
Middle school	0.428***	(0.342, 0.514)	-0.049	(-0.481, 0.383)	0.996***	(0.856, 1.136)	0.186***	(0.098, 0.274)	0.092*	(-0.001, 0.185)	0.268	(-0.075, 0.610)
High school	0.472***	(0.395, 0.549)	-0.011	(-0.395, 0.373)	1.056***	(0.930, 1.182)	0.187***	(0.106, 0.267)	0.124***	(0.039, 0.209)	0.330**	(0.021, 0.639)
College and above	0.214***	(0.069, 0.358)	0.523	(-0.190, 1.236)	0.665***	(0.436, 0.894)	-0.144*	(-0.301, 0.013)	-0.006	(-0.170, 0.159)	-0.135	(-0.715, 0.444)
Marital status	-0.241***	(-0.364, -0.118)	0.272	(-0.353, 0.897)	-0.339***	(-0.543, -0.135)	-0.212***	(-0.338, -0.086)	-0.099	(-0.233, 0.034)	-0.516**	(-1.011, -0.021)
Gender	0.231***	(0.216, 0.245)	0.042	(-0.013, 0.097)	0.113***	(0.088, 0.139)	0.419***	(0.402, 0.435)	0.077***	(0.060, 0.094)	0.416***	(0.354, 0.479)
IMR	1.277***	(0.428, 2.125)	-2.194	(-6.582, 2.193)	1.836***	(0.444, 3.229)	1.163***	(0.293, 2.033)	0.662	(-0.259, 1.582)	2.422	(-0.978, 5.821)

Note: for the categorical variables, 0 denotes the lowest level, and 3 denotes the highest level; SES was socioeconomic status; IMR was inverse mills ratio; province fixed effect and wave fixed effect were also controlled; * $p<0.1$, ** $p<0.05$, *** $p<0.01$.

Table S7 Regression results using multiple imputations with chained equation

	(1)		(2)		(3)		(4)		(5)		(6)	
	Intrinsic capacity		Locomotor		Cognitive		Vitality		Sensory		Psychological	
	dy/dx	(95% CI)	dy/dx	(95% CI)	dy/dx	(95% CI)	dy/dx	(95% CI)	dy/dx	(95% CI)	dy/dx	(95% CI)
Family economic status												
Poorer	0.029***	(0.016, 0.042)	0.024	(-0.025, 0.074)	0.063***	(0.040, 0.086)	0.026***	(0.012, 0.040)	0.012	(-0.003, 0.028)	-0.031	(-0.083, 0.021)
Average	0.042***	(0.028, 0.055)	0.029	(-0.019, 0.077)	0.073***	(0.049, 0.096)	0.028***	(0.014, 0.042)	0.034***	(0.018, 0.049)	-0.021	(-0.074, 0.031)
Richer	0.052***	(0.039, 0.066)	0.005	(-0.045, 0.054)	0.096***	(0.073, 0.120)	0.034***	(0.020, 0.049)	0.040***	(0.024, 0.056)	-0.011	(-0.064, 0.043)
Richest	0.065***	(0.050, 0.079)	-0.003	(-0.057, 0.051)	0.130***	(0.105, 0.155)	0.036***	(0.021, 0.052)	0.052***	(0.035, 0.069)	-0.039	(-0.095, 0.018)
Mother literate	0.034***	(0.019, 0.049)	0.030	(-0.010, 0.070)	0.035***	(0.010, 0.060)	0.019**	(0.001, 0.037)	0.039***	(0.020, 0.057)	-0.004	(-0.067, 0.059)
Father literate	0.038***	(0.028, 0.048)	0.030*	(-0.002, 0.063)	0.080***	(0.063, 0.097)	0.020***	(0.009, 0.030)	0.008	(-0.003, 0.020)	0.033	(-0.008, 0.074)
Childhood health												
Average	-0.041***	(-0.051, -0.032)	-0.019	(-0.051, 0.013)	-0.018**	(-0.034, -0.001)	-0.033***	(-0.043, -0.022)	-0.058***	(-0.070, -0.047)	-0.063***	(-0.104, -0.023)
Worse	-0.082***	(-0.097, -0.067)	-0.029	(-0.081, 0.022)	-0.044***	(-0.070, -0.018)	-0.078***	(-0.094, -0.062)	-0.074***	(-0.092, -0.057)	-0.193***	(-0.255, -0.131)
Severe illness before 16	-0.024**	(-0.045, -0.004)	-0.021	(-0.089, 0.048)	-0.034*	(-0.069, 0.002)	-0.005	(-0.026, 0.015)	-0.007	(-0.028, 0.015)	-0.063	(-0.146, 0.021)
Severe illness after 16	-0.067***	(-0.079, -0.054)	-0.195***	(-0.245, -0.145)	-0.040***	(-0.061, -0.018)	-0.045***	(-0.059, -0.032)	-0.039***	(-0.053, -0.025)	-0.180***	(-0.231, -0.129)
Vaccine deficiency	-0.034***	(-0.047, -0.021)	-0.019	(-0.068, 0.030)	-0.075***	(-0.098, -0.051)	-0.022***	(-0.035, -0.008)	-0.007	(-0.021, 0.008)	-0.011	(-0.065, 0.043)
Physician deficiency	-0.033***	(-0.049, -0.018)	-0.034	(-0.093, 0.025)	-0.023*	(-0.050, 0.004)	-0.005	(-0.021, 0.011)	-0.030***	(-0.047, -0.012)	-0.122***	(-0.185, -0.059)
Healthy activity	0.028***	(0.018, 0.038)	0.004	(-0.030, 0.037)	0.060***	(0.043, 0.077)	0.017***	(0.005, 0.028)	0.008	(-0.004, 0.020)	0.030	(-0.011, 0.070)
Starvation												
1	-0.005	(-0.017, 0.007)	0.030	(-0.011, 0.070)	0.013	(-0.008, 0.033)	0.003	(-0.011, 0.016)	-0.021***	(-0.035, -0.006)	-0.085***	(-0.135, -0.036)
2	0.011	(-0.004, 0.025)	0.054**	(0.007, 0.101)	0.047***	(0.022, 0.073)	0.015*	(-0.001, 0.031)	-0.021**	(-0.038, -0.004)	-0.050	(-0.111, 0.010)
3	-0.022***	(-0.037, -0.008)	0.044*	(-0.007, 0.094)	-0.022*	(-0.047, 0.003)	-0.004	(-0.019, 0.011)	-0.024***	(-0.040, -0.007)	-0.134***	(-0.194, -0.075)
Famine	0.011*	(-0.002, 0.023)	0.033	(-0.013, 0.078)	0.031***	(0.010, 0.053)	0.024***	(0.010, 0.037)	-0.021**	(-0.037, -0.005)	-0.005	(-0.057, 0.048)
Famine death in family	-0.009	(-0.024, 0.006)	0.015	(-0.035, 0.064)	-0.014	(-0.040, 0.012)	0.011	(-0.005, 0.028)	-0.006	(-0.023, 0.011)	-0.087***	(-0.150, -0.024)
Family SES in childhood												
2	0.003	(-0.007, 0.013)	0.002	(-0.032, 0.035)	-0.003	(-0.020, 0.014)	-0.001	(-0.012, 0.010)	0.000	(-0.011, 0.011)	0.033	(-0.008, 0.075)
3	0.002	(-0.015, 0.018)	0.007	(-0.048, 0.062)	-0.026*	(-0.055, 0.002)	-0.020**	(-0.039, -0.000)	0.019*	(-0.001, 0.039)	0.089**	(0.018, 0.159)
Neighbourhood quality												
1	-0.011**	(-0.021, -0.001)	-0.023	(-0.057, 0.011)	-0.008	(-0.025, 0.009)	0.002	(-0.009, 0.013)	-0.018***	(-0.030, -0.007)	-0.022	(-0.063, 0.019)
2	-0.035***	(-0.052, -0.018)	-0.030	(-0.093, 0.033)	-0.064***	(-0.095, -0.032)	-0.017*	(-0.035, 0.001)	-0.019*	(-0.039, 0.001)	-0.044	(-0.116, 0.028)
3	-0.049***	(-0.078, -0.019)	-0.068	(-0.186, 0.050)	-0.051**	(-0.099, -0.003)	-0.036***	(-0.064, -0.009)	-0.021	(-0.053, 0.010)	-0.039	(-0.145, 0.067)
Friendship deficiency												
1	-0.039***	(-0.049, -0.028)	-0.026	(-0.062, 0.010)	-0.055***	(-0.074, -0.037)	-0.021***	(-0.032, -0.009)	-0.026***	(-0.038, -0.014)	-0.030	(-0.073, 0.013)

2	-0.066***	(-0.084, -0.048)	-0.019	(-0.087, 0.049)	-0.103***	(-0.134, -0.071)	-0.026***	(-0.045, -0.006)	-0.040***	(-0.061, -0.020)	-0.108***	(-0.182, -0.033)
3	-0.107***	(-0.149, -0.065)	-0.034	(-0.177, 0.108)	-0.100***	(-0.167, -0.032)	-0.024	(-0.061, 0.013)	-0.076***	(-0.121, -0.030)	-0.325***	(-0.483, -0.167)
Mother mental health problem	-0.009	(-0.023, 0.004)	0.011	(-0.036, 0.058)	-0.007	(-0.031, 0.016)	0.008	(-0.007, 0.022)	-0.002	(-0.018, 0.014)	-0.109***	(-0.165, -0.052)
Father mental health problem	-0.036***	(-0.050, -0.021)	-0.023	(-0.075, 0.028)	-0.039***	(-0.065, -0.012)	-0.018**	(-0.033, -0.002)	-0.021**	(-0.038, -0.004)	-0.050	(-0.112, 0.012)
Domestic violence												
1	0.004	(-0.008, 0.016)	0.015	(-0.027, 0.057)	0.007	(-0.014, 0.027)	0.016**	(0.003, 0.028)	-0.004	(-0.018, 0.010)	-0.056**	(-0.106, -0.006)
2	0.005	(-0.010, 0.019)	0.019	(-0.028, 0.065)	0.024*	(-0.002, 0.049)	0.016*	(-0.002, 0.035)	-0.013	(-0.030, 0.004)	-0.107***	(-0.169, -0.045)
3	-0.004	(-0.036, 0.027)	0.015	(-0.080, 0.111)	-0.021	(-0.072, 0.030)	0.040***	(0.011, 0.070)	-0.000	(-0.037, 0.036)	-0.069	(-0.200, 0.061)
Mentorship support	0.021***	(0.010, 0.031)	0.046***	(0.014, 0.078)	0.046***	(0.028, 0.064)	0.007	(-0.005, 0.019)	0.012*	(-0.000, 0.025)	-0.006	(-0.049, 0.037)
Tobacco consumption	-0.033***	(-0.044, -0.021)	-0.007	(-0.050, 0.035)	-0.049***	(-0.069, -0.030)	-0.011	(-0.024, 0.003)	-0.017**	(-0.031, -0.004)	-0.062***	(-0.108, -0.015)
Alcohol consumption	0.026***	(0.016, 0.036)	0.057***	(0.024, 0.090)	0.010	(-0.007, 0.027)	0.048***	(0.036, 0.059)	0.017***	(0.006, 0.029)	-0.002	(-0.043, 0.039)
Chronic disease	-0.084***	(-0.093, -0.074)	-0.104***	(-0.132, -0.076)	-0.025***	(-0.041, -0.008)	-0.029***	(-0.039, -0.019)	-0.101***	(-0.113, -0.090)	-0.339***	(-0.377, -0.300)
Urban	0.053***	(0.040, 0.065)	0.002	(-0.040, 0.045)	0.092***	(0.071, 0.113)	0.031***	(0.016, 0.045)	0.032***	(0.017, 0.047)	-0.053**	(-0.103, -0.003)
Age group												
Age 45–60	-0.122***	(-0.150, -0.094)	-0.104***	(-0.149, -0.060)	-0.091***	(-0.143, -0.040)	-0.045***	(-0.073, -0.016)	-0.182***	(-0.219, -0.145)	-0.133**	(-0.252, -0.015)
Age 60–70	-0.218***	(-0.247, -0.188)	-0.237***	(-0.291, -0.184)	-0.136***	(-0.190, -0.082)	-0.183***	(-0.213, -0.154)	-0.249***	(-0.287, -0.211)	-0.115*	(-0.238, 0.007)
Age 70–80	-0.356***	(-0.388, -0.325)	-0.595***	(-0.675, -0.515)	-0.263***	(-0.320, -0.205)	-0.346***	(-0.377, -0.314)	-0.306***	(-0.347, -0.266)	-0.136**	(-0.267, -0.006)
Age ≥80	-0.527***	(-0.572, -0.482)	-1.523***	(-1.750, -1.296)	-0.373***	(-0.446, -0.299)	-0.456***	(-0.501, -0.411)	-0.371***	(-0.421, -0.320)	-0.182**	(-0.350, -0.013)
Urban hukou	0.056***	(0.041, 0.070)	0.019	(-0.030, 0.068)	0.112***	(0.088, 0.137)	-0.003	(-0.021, 0.014)	0.023***	(0.006, 0.041)	0.052*	(-0.007, 0.111)
Education level												
Primary school	0.187***	(0.174, 0.199)	0.140***	(0.097, 0.182)	0.545***	(0.523, 0.568)	0.026***	(0.014, 0.038)	-0.004	(-0.018, 0.010)	0.010	(-0.040, 0.060)
Middle school	0.300***	(0.284, 0.315)	0.151***	(0.102, 0.200)	0.799***	(0.772, 0.826)	0.078***	(0.061, 0.094)	0.028***	(0.011, 0.046)	0.035	(-0.027, 0.097)
High school	0.361***	(0.343, 0.380)	0.163***	(0.103, 0.223)	0.888***	(0.857, 0.920)	0.089***	(0.067, 0.111)	0.073***	(0.050, 0.096)	0.098**	(0.021, 0.176)
College and above	0.418***	(0.365, 0.470)	0.164	(-0.036, 0.364)	0.947***	(0.878, 1.015)	0.066**	(0.003, 0.128)	0.099**	(0.022, 0.175)	0.163	(-0.043, 0.370)
Marital status	-0.050***	(-0.062, -0.038)	-0.034	(-0.078, 0.010)	-0.067***	(-0.088, -0.047)	-0.041***	(-0.053, -0.029)	0.006	(-0.008, 0.020)	-0.169***	(-0.217, -0.121)
Gender	0.235***	(0.223, 0.248)	0.054**	(0.008, 0.100)	0.126***	(0.105, 0.147)	0.415***	(0.402, 0.429)	0.081***	(0.067, 0.095)	0.427***	(0.376, 0.477)
N	29434		29496		29496		29496		29496		29434	

Note: for the categorical variables, 0 denotes the lowest level, and 3 denotes the highest level; SES was socioeconomic status; province fixed effect and wave fixed effect were also controlled; * $p < 0.1$,

** $p < 0.05$, *** $p < 0.01$.

Table S8 Mediation analysis of association between early-life factors and intrinsic capacity

	(1)		(2)		(3)		(4)		(5)		(6)	
	Intrinsic capacity		Locomotor		Cognitive		Vitality		Sensory		Psychological	
	dy/dx	(95% CI)	dy/dx	(95% CI)	dy/dx	(95% CI)	dy/dx	(95% CI)	dy/dx	(95% CI)	dy/dx	(95% CI)
Mother literate	0.076***	(0.057, 0.094)	0.050**	(0.006, 0.094)	0.114***	(0.081, 0.148)	0.034***	(0.012, 0.055)	0.059***	(0.038, 0.080)	0.000	(-0.072, 0.072)
Father literate	0.075***	(0.063, 0.087)	0.048***	(0.014, 0.081)	0.159***	(0.136, 0.182)	0.033***	(0.021, 0.045)	0.021***	(0.008, 0.035)	0.048**	(0.003, 0.094)
Childhood health												
Average	-0.046***	(-0.058, -0.034)	-0.003	(-0.039, 0.032)	-0.033***	(-0.056, -0.010)	-0.032***	(-0.045, -0.020)	-0.062***	(-0.076, -0.048)	-0.057**	(-0.104, -0.011)
Worse	-0.085***	(-0.103, -0.066)	-0.033	(-0.092, 0.025)	-0.053***	(-0.088, -0.018)	-0.075***	(-0.094, -0.056)	-0.078***	(-0.098, -0.057)	-0.214***	(-0.287, -0.142)
Severe illness before 16	-0.028**	(-0.053, -0.002)	-0.034	(-0.109, 0.041)	-0.035	(-0.083, 0.013)	-0.007	(-0.031, 0.018)	-0.008	(-0.033, 0.017)	-0.062	(-0.159, 0.035)
Severe illness after 16	-0.070***	(-0.086, -0.054)	-0.203***	(-0.260, -0.147)	-0.046***	(-0.075, -0.017)	-0.048***	(-0.064, -0.032)	-0.037***	(-0.053, -0.020)	-0.200***	(-0.260, -0.141)
Vaccine deficiency	-0.067***	(-0.083, -0.051)	-0.001	(-0.051, 0.050)	-0.158***	(-0.190, -0.127)	-0.030***	(-0.046, -0.014)	-0.016*	(-0.033, 0.001)	-0.012	(-0.076, 0.053)
Physician deficiency	-0.053***	(-0.072, -0.033)	0.018	(-0.040, 0.077)	-0.079***	(-0.116, -0.043)	-0.012	(-0.031, 0.008)	-0.045***	(-0.065, -0.025)	-0.070*	(-0.144, 0.003)
Healthy activity	0.075***	(0.063, 0.087)	0.029	(-0.006, 0.063)	0.168***	(0.145, 0.190)	0.023***	(0.010, 0.036)	0.024***	(0.011, 0.037)	0.049**	(0.003, 0.095)
Starvation												
1	-0.018**	(-0.033, -0.003)	0.027	(-0.018, 0.072)	-0.013	(-0.041, 0.016)	-0.003	(-0.019, 0.013)	-0.024***	(-0.041, -0.008)	-0.090***	(-0.148, -0.033)
2	-0.005	(-0.023, 0.013)	0.034	(-0.019, 0.088)	0.020	(-0.015, 0.054)	0.006	(-0.013, 0.025)	-0.027***	(-0.047, -0.008)	-0.045	(-0.115, 0.025)
3	-0.071***	(-0.090, -0.053)	0.002	(-0.054, 0.057)	-0.126***	(-0.161, -0.092)	-0.019**	(-0.038, -0.001)	-0.042***	(-0.062, -0.023)	-0.158***	(-0.228, -0.087)
Famine	0.025***	(0.009, 0.042)	0.041	(-0.009, 0.091)	0.063***	(0.033, 0.093)	0.032***	(0.017, 0.048)	-0.013	(-0.031, 0.005)	0.006	(-0.055, 0.067)
Famine death in family	-0.011	(-0.030, 0.007)	0.046*	(-0.007, 0.099)	-0.017	(-0.052, 0.017)	0.013	(-0.006, 0.032)	-0.009	(-0.028, 0.010)	-0.095**	(-0.169, -0.020)
Family SES in childhood												
2	0.019***	(0.007, 0.032)	0.016	(-0.021, 0.054)	0.028**	(0.004, 0.051)	0.007	(-0.005, 0.020)	0.010	(-0.003, 0.023)	0.034	(-0.014, 0.082)
3	0.049***	(0.029, 0.070)	0.014	(-0.047, 0.075)	0.075***	(0.036, 0.114)	-0.005	(-0.027, 0.017)	0.040***	(0.016, 0.063)	0.084**	(0.004, 0.164)
Neighbourhood quality												
1	-0.017***	(-0.029, -0.004)	-0.021	(-0.058, 0.016)	-0.025**	(-0.048, -0.002)	0.002	(-0.011, 0.015)	-0.019***	(-0.033, -0.006)	-0.027	(-0.074, 0.020)
2	-0.051***	(-0.072, -0.029)	0.001	(-0.062, 0.065)	-0.100***	(-0.142, -0.058)	-0.024**	(-0.046, -0.003)	-0.024**	(-0.047, -0.001)	-0.026	(-0.110, 0.058)
3	-0.079***	(-0.118, -0.040)	-0.128*	(-0.272, 0.016)	-0.122***	(-0.191, -0.053)	-0.052***	(-0.086, -0.019)	-0.028	(-0.066, 0.010)	-0.057	(-0.186, 0.072)
Friendship deficiency												
1	-0.071***	(-0.084, -0.058)	-0.067***	(-0.107, -0.027)	-0.124***	(-0.149, -0.099)	-0.031***	(-0.045, -0.017)	-0.033***	(-0.047, -0.019)	-0.051**	(-0.101, -0.001)
2	-0.101***	(-0.124, -0.079)	-0.025	(-0.097, 0.046)	-0.184***	(-0.227, -0.141)	-0.034***	(-0.057, -0.010)	-0.045***	(-0.069, -0.021)	-0.152***	(-0.241, -0.063)
3	-0.147***	(-0.201, -0.093)	-0.046	(-0.200, 0.109)	-0.195***	(-0.296, -0.094)	-0.039*	(-0.084, 0.005)	-0.074**	(-0.131, -0.017)	-0.324***	(-0.514, -0.133)
Mother mental health problem	-0.009	(-0.026, 0.009)	0.022	(-0.024, 0.067)	-0.010	(-0.042, 0.021)	0.016*	(-0.001, 0.032)	-0.001	(-0.020, 0.017)	-0.108***	(-0.174, -0.042)
Father mental health problem	-0.050***	(-0.068, -0.031)	-0.031	(-0.084, 0.021)	-0.073***	(-0.108, -0.039)	-0.026***	(-0.044, -0.008)	-0.023**	(-0.042, -0.003)	-0.063*	(-0.134, 0.009)
Domestic violence												

1	0.008	(-0.007, 0.023)	-0.005	(-0.050, 0.040)	0.017	(-0.011, 0.045)	0.016**	(0.001, 0.031)	-0.006	(-0.022, 0.011)	-0.052*	(-0.110, 0.006)
2	0.005	(-0.013, 0.023)	0.012	(-0.038, 0.062)	0.027*	(-0.005, 0.060)	0.020*	(-0.001, 0.042)	-0.017*	(-0.036, 0.002)	-0.112***	(-0.182, -0.042)
3	-0.005	(-0.045, 0.035)	0.019	(-0.088, 0.126)	-0.018	(-0.089, 0.052)	0.044***	(0.011, 0.077)	0.004	(-0.039, 0.046)	-0.079	(-0.227, 0.069)
Mentorship support	0.037***	(0.024, 0.050)	0.044**	(0.009, 0.079)	0.082***	(0.058, 0.107)	0.017**	(0.003, 0.031)	0.016**	(0.002, 0.031)	-0.009	(-0.058, 0.041)
Age group												
Age 45–60	-0.118***	(-0.158, -0.077)	-0.093***	(-0.152, -0.034)	-0.092**	(-0.170, -0.015)	-0.045**	(-0.081, -0.009)	-0.180***	(-0.227, -0.133)	-0.102	(-0.242, 0.039)
Age 60–70	-0.256***	(-0.297, -0.214)	-0.237***	(-0.304, -0.169)	-0.235***	(-0.315, -0.155)	-0.199***	(-0.235, -0.162)	-0.257***	(-0.305, -0.208)	-0.107	(-0.252, 0.038)
Age 70–80	-0.402***	(-0.446, -0.357)	-0.552***	(-0.645, -0.459)	-0.412***	(-0.497, -0.328)	-0.359***	(-0.398, -0.320)	-0.303***	(-0.354, -0.253)	-0.129	(-0.283, 0.025)
Age ≥80	-0.605***	(-0.670, -0.540)	-1.470***	(-1.773, -1.167)	-0.655***	(-0.768, -0.542)	-0.474***	(-0.536, -0.412)	-0.351***	(-0.418, -0.285)	-0.240**	(-0.462, -0.018)
Marital status	-0.068***	(-0.083, -0.053)	-0.053**	(-0.103, -0.003)	-0.101***	(-0.130, -0.072)	-0.047***	(-0.062, -0.033)	-0.005	(-0.021, 0.011)	-0.169***	(-0.226, -0.111)
Gender	0.313***	(0.298, 0.327)	0.076***	(0.027, 0.126)	0.322***	(0.295, 0.349)	0.440***	(0.424, 0.456)	0.087***	(0.071, 0.103)	0.445***	(0.387, 0.503)
Tobacco consumption	-0.043***	(-0.057, -0.029)	0.013	(-0.033, 0.059)	-0.074***	(-0.099, -0.049)	-0.013*	(-0.029, 0.002)	-0.022***	(-0.038, -0.007)	-0.057**	(-0.111, -0.003)
Alcohol consumption	0.032***	(0.020, 0.044)	0.054***	(0.017, 0.091)	0.023**	(0.000, 0.046)	0.048***	(0.035, 0.061)	0.027***	(0.013, 0.040)	-0.004	(-0.051, 0.044)
Chronic disease	-0.087***	(-0.098, -0.075)	-0.098***	(-0.128, -0.067)	-0.026**	(-0.048, -0.004)	-0.035***	(-0.047, -0.023)	-0.108***	(-0.121, -0.094)	-0.326***	(-0.371, -0.281)

Note: for the categorical variables, 0 denotes the lowest level, and 3 denotes the highest level; SES was socioeconomic status; province fixed effect and wave fixed effect were also controlled; * $p < 0.1$,

** $p < 0.05$, *** $p < 0.01$.

Table S9 Modified concentration index for intrinsic capacity and subdomains

	All	Older group (age 60+)	Younger group (age <60)
Intrinsic capacity	0.024 (95% CI: 0.021 to 0.027)	0.027 (95% CI: 0.022 to 0.032)	0.019 (95% CI: 0.015 to 0.023)
Locomotor	0.002 (95% CI: -0.002 to 0.006)	0.003 (95% CI: -0.005 to 0.011)	0.001 (95% CI: -0.003 to 0.005)
Cognitive	0.043 (95% CI: 0.036 to 0.050)	0.049 (95% CI: 0.039 to 0.059)	0.035 (95% CI: 0.026 to 0.044)
Vitality	0.012 (95% CI: 0.011 to 0.013)	0.014 (95% CI: 0.012 to 0.016)	0.006 (95% CI: 0.004 to 0.008)
Sensory	0.032 (95% CI: 0.025 to 0.039)	0.028 (95% CI: 0.019 to 0.037)	0.031 (95% CI: 0.022 to 0.040)
Psychological	0.005 (95% CI: -0.006 to 0.016)	0.005 (95% CI: -0.011 to 0.021)	0.006 (95% CI: -0.008 to 0.020)

Note: the modified concentration index was calculated.

Table S10 Decomposition of inequalities in intrinsic capacity

	(1)			(2)			(3)			(4)			(5)			(6)		
	Intrinsic capacity			Locomotor			Cognitive			Vitality			Sensory			Psychological		
	elas.	con. index	per.	elas.	con. index	per.	elas.	con. index	per.	elas.	con. index	per.	elas.	con. index	per.	elas.	con. index	per.
SES factors																		
Household economic status																		
Poorer	0.004	-0.313	-5.02%	0.001	-0.313	-21.41%	0.006	-0.313	-4.07%	0.004	-0.313	-11.54%	0.004	-0.313	-3.51%	-0.003	-0.313	15.93%
Average	0.005	0.003	0.07%	0.001	0.003	0.12%	0.006	0.003	0.05%	0.005	0.003	0.13%	0.009	0.003	0.09%	0.000	0.003	-0.03%
Richer	0.005	0.337	7.63%	0.000	0.337	2.60%	0.008	0.337	6.60%	0.005	0.337	13.48%	0.009	0.337	9.13%	-0.001	0.337	-8.13%
Richest	0.007	0.736	21.95%	0.000	0.736	-2.68%	0.012	0.736	19.76%	0.004	0.736	28.54%	0.014	0.736	31.75%	-0.002	0.736	-28.95%
Education level																		
Primary school	0.045	-0.033	-6.32%	0.007	-0.033	-11.37%	0.113	-0.033	-8.81%	0.007	-0.033	-1.88%	-0.002	-0.033	0.20%	0.004	-0.033	-2.34%
Middle school	0.038	0.077	12.24%	0.004	0.077	15.69%	0.088	0.077	15.75%	0.010	0.077	6.66%	0.008	0.077	1.92%	0.002	0.077	3.49%
High school	0.025	0.238	24.39%	0.003	0.238	28.41%	0.052	0.238	28.98%	0.006	0.238	13.27%	0.011	0.238	7.90%	0.005	0.238	23.37%
College and above	0.001	0.628	3.64%	0.000	0.628	3.71%	0.003	0.628	4.01%	0.000	0.628	0.76%	0.001	0.628	1.52%	0.001	0.628	6.22%
Urban	0.008	0.252	8.48%	0.000	0.252	0.34%	0.013	0.252	7.78%	0.004	0.252	7.72%	0.011	0.252	8.58%	-0.007	0.252	-31.50%
Urban hukou	0.008	0.269	8.48%	0.000	0.269	1.98%	0.012	0.269	7.41%	0.002	0.269	3.64%	0.009	0.269	7.72%	0.004	0.269	19.03%
Demographic factors																		
Age group																		
Age 45–60	-0.037	0.019	-3.01%	-0.005	0.019	-4.97%	-0.024	0.019	-1.11%	-0.016	0.019	-2.75%	-0.132	0.019	-8.13%	-0.022	0.019	-7.73%
Age 60–70	-0.041	-0.009	1.55%	-0.008	-0.009	3.46%	-0.022	-0.009	0.47%	-0.038	-0.009	3.04%	-0.110	-0.009	3.17%	-0.013	-0.009	2.13%
Age 70–80	-0.024	-0.051	5.19%	-0.007	-0.051	17.73%	-0.015	-0.051	1.81%	-0.027	-0.051	11.91%	-0.050	-0.051	8.11%	-0.006	-0.051	5.50%
Age ≥80	-0.005	-0.113	2.44%	-0.003	-0.113	15.07%	-0.004	-0.113	0.94%	-0.005	-0.113	4.86%	-0.008	-0.113	2.91%	-0.002	-0.113	3.19%
Marital status	-0.005	-0.017	0.36%	-0.001	-0.017	0.66%	-0.006	-0.017	0.22%	-0.004	-0.017	0.64%	-0.001	-0.017	0.04%	-0.010	-0.017	3.07%
Gender	0.066	0.007	1.96%	0.002	0.007	0.59%	0.029	0.007	0.47%	0.131	0.007	8.05%	0.052	0.007	1.18%	0.079	0.007	10.33%
Lifestyle factors																		
Tobacco consumption	-0.006	0.025	-0.59%	0.001	0.025	0.86%	-0.007	0.025	-0.42%	-0.002	0.025	-0.44%	-0.008	0.025	-0.64%	-0.007	0.025	-3.39%
Alcohol consumption	0.005	0.037	0.78%	0.002	0.037	3.79%	0.001	0.037	0.10%	0.010	0.037	3.27%	0.011	0.037	1.34%	-0.001	0.037	-0.56%
Chronic disease	-0.033	0.005	-0.65%	-0.007	0.005	-1.71%	-0.007	0.005	-0.08%	-0.014	0.005	-0.60%	-0.097	0.005	-1.47%	-0.083	0.005	-7.29%
Early-life factors																		
Mother literate	0.002	0.185	1.29%	0.001	0.185	4.45%	0.000	0.185	0.17%	0.001	0.185	2.18%	0.006	0.185	3.46%	0.000	0.185	-1.44%
Father literate	0.010	0.065	2.61%	0.002	0.065	5.17%	0.016	0.065	2.38%	0.006	0.065	3.50%	0.007	0.065	1.41%	0.007	0.065	8.14%
Childhood health																		
Average	-0.013	-0.015	0.81%	0.000	-0.015	0.14%	-0.007	-0.015	0.23%	-0.010	-0.015	1.33%	-0.042	-0.015	2.03%	-0.012	-0.015	3.22%

Worse	-0.006	-0.023	0.55%	0.000	-0.023	0.49%	-0.003	-0.023	0.15%	-0.006	-0.023	1.14%	-0.013	-0.023	0.93%	-0.010	-0.023	4.28%
Severe illness before 16	-0.001	-0.001	0.00%	0.000	-0.001	0.01%	-0.001	-0.001	0.00%	0.000	-0.001	0.00%	-0.001	-0.001	0.00%	-0.001	-0.001	0.02%
Severe illness after 16	-0.006	0.009	-0.24%	-0.004	0.009	-1.71%	-0.003	0.009	-0.06%	-0.005	0.009	-0.39%	-0.008	0.009	-0.23%	-0.012	0.009	-2.14%
Vaccine deficiency	-0.002	-0.085	0.81%	0.000	-0.085	-0.97%	-0.005	-0.085	0.90%	-0.002	-0.085	1.34%	-0.001	-0.085	0.31%	0.000	-0.085	0.68%
Physician deficiency	-0.002	-0.079	0.59%	0.000	-0.079	-1.17%	-0.001	-0.079	0.24%	0.000	-0.079	0.24%	-0.005	-0.079	1.35%	-0.003	-0.079	3.96%
Healthy activity	0.005	0.081	1.83%	0.001	0.081	2.71%	0.011	0.081	2.04%	0.002	0.081	1.51%	0.003	0.081	0.71%	0.005	0.081	8.07%
Starvation																		
1	-0.001	-0.008	0.04%	0.001	-0.008	-0.48%	0.003	-0.008	-0.05%	0.000	-0.008	0.00%	-0.010	-0.008	0.26%	-0.012	-0.008	1.73%
2	0.001	-0.007	-0.02%	0.001	-0.007	-0.23%	0.004	-0.007	-0.06%	0.001	-0.007	-0.05%	-0.005	-0.007	0.11%	-0.003	-0.007	0.32%
3	-0.004	-0.063	0.97%	0.000	-0.063	-1.34%	-0.003	-0.063	0.42%	-0.001	-0.063	0.67%	-0.009	-0.063	1.85%	-0.012	-0.063	13.25%
Famine	0.010	-0.011	-0.45%	0.003	-0.011	-1.83%	0.019	-0.011	-0.49%	0.016	-0.011	-1.57%	-0.014	-0.011	0.48%	0.002	-0.011	-0.41%
Famine death in family	0.000	-0.022	0.04%	0.001	-0.022	-0.63%	0.000	-0.022	0.02%	0.001	-0.022	-0.18%	-0.001	-0.022	0.09%	-0.004	-0.022	1.59%
Family SES in childhood																		
2	0.003	0.000	0.00%	0.001	0.000	0.00%	0.001	0.000	0.00%	0.002	0.000	0.00%	0.006	0.000	0.00%	0.007	0.000	0.01%
3	0.000	0.142	0.21%	0.000	0.142	0.25%	-0.001	0.142	-0.29%	-0.001	0.142	-1.28%	0.003	0.142	1.39%	0.003	0.142	7.10%
Neighbourhood quality																		
1	-0.002	-0.017	0.17%	-0.001	-0.017	0.66%	-0.002	-0.017	0.09%	0.001	-0.017	-0.11%	-0.008	-0.017	0.45%	-0.003	-0.017	1.11%
2	-0.002	-0.059	0.43%	0.000	-0.059	-0.10%	-0.003	-0.059	0.39%	-0.001	-0.059	0.53%	-0.002	-0.059	0.39%	-0.001	-0.059	0.74%
3	-0.001	-0.085	0.32%	0.000	-0.085	1.48%	-0.001	-0.085	0.15%	-0.001	-0.085	0.64%	-0.001	-0.085	0.28%	-0.001	-0.085	0.88%
Friendship deficiency																		
1	-0.007	-0.045	1.38%	-0.002	-0.045	4.00%	-0.009	-0.045	0.89%	-0.004	-0.045	1.71%	-0.010	-0.045	1.46%	-0.005	-0.045	4.38%
2	-0.003	-0.070	0.85%	0.000	-0.070	0.42%	-0.004	-0.070	0.66%	-0.001	-0.070	0.71%	-0.003	-0.070	0.77%	-0.004	-0.070	5.11%
3	-0.001	-0.060	0.20%	0.000	-0.060	0.13%	-0.001	-0.060	0.09%	0.000	-0.060	0.12%	-0.001	-0.060	0.21%	-0.002	-0.060	1.75%
Mother mental problem	-0.001	-0.022	0.07%	0.001	-0.022	-0.82%	0.000	-0.022	0.03%	0.003	-0.022	-0.67%	0.000	-0.022	-0.03%	-0.013	-0.022	5.17%
Father mental problem	-0.005	-0.033	0.68%	-0.001	-0.033	1.08%	-0.005	-0.033	0.38%	-0.003	-0.033	0.95%	-0.006	-0.033	0.63%	-0.005	-0.033	3.22%
Domestic violence																		
1	0.000	0.023	0.03%	0.000	0.023	-0.16%	0.000	0.023	0.02%	0.002	0.023	0.31%	-0.002	0.023	-0.13%	-0.003	0.023	-1.42%
2	0.000	0.021	0.01%	0.000	0.021	0.15%	0.001	0.021	0.05%	0.001	0.021	0.23%	-0.003	0.021	-0.19%	-0.005	0.021	-1.77%
3	0.000	0.017	-0.01%	0.000	0.017	0.03%	0.000	0.017	-0.01%	0.001	0.017	0.08%	0.000	0.017	0.01%	-0.001	0.017	-0.21%
Mentorship support	0.003	0.065	0.74%	0.001	0.065	3.42%	0.005	0.065	0.74%	0.002	0.065	1.09%	0.004	0.065	0.78%	-0.001	0.065	-1.63%

Note: elas. means elasticity for the modified concentration index (con. index); per. means the per cent of the determinant's contribution to the modified concentration index; for the categorical variables, 0 denotes the lowest level, and 3 denotes the highest level; SES was socioeconomic status; province fixed effect and wave fixed effect were also controlled.

Table S11 Mediation analysis of decomposing the inequalities in intrinsic capacity

	(1)			(2)			(3)			(4)			(5)			(6)		
	Intrinsic capacity			Locomotor			Cognitive			Vitality			Sensory			Psychological		
	elas.	con. index	per.	elas.	con. index	per.	elas.	con. index	per.	elas.	con. index	per.	elas.	con. index	per.	elas.	con. index	per.
Lifestyle factors																		
Tobacco consumption	-0.009	0.025	-0.94%	0.001	0.025	0.66%	-0.013	0.025	-0.78%	-0.003	0.025	-0.67%	-0.011	0.025	-0.88%	-0.008	0.025	-3.66%
Alcohol consumption	0.007	0.037	1.01%	0.002	0.037	3.88%	0.004	0.037	0.34%	0.011	0.037	3.45%	0.013	0.037	1.49%	-0.001	0.037	-0.35%
Chronic disease	-0.033	0.005	-0.66%	-0.008	0.005	-1.72%	-0.008	0.005	-0.09%	-0.015	0.005	-0.61%	-0.097	0.005	-1.47%	-0.083	0.005	-7.29%
Demographic factors																		
Age group																		
Age 45–60	-0.035	0.019	-2.86%	-0.006	0.019	-5.22%	-0.024	0.019	-1.07%	-0.015	0.019	-2.51%	-0.128	0.019	-7.85%	-0.020	0.019	-7.23%
Age 60–70	-0.047	-0.009	1.78%	-0.009	-0.009	3.80%	-0.037	-0.009	0.78%	-0.040	-0.009	3.17%	-0.111	-0.009	3.19%	-0.013	-0.009	2.17%
Age 70–80	-0.028	-0.051	6.03%	-0.008	-0.051	19.08%	-0.025	-0.051	2.96%	-0.028	-0.051	12.35%	-0.050	-0.051	8.12%	-0.006	-0.051	5.63%
Age ≥80	-0.006	-0.113	2.80%	-0.003	-0.113	15.70%	-0.006	-0.113	1.45%	-0.005	-0.113	5.04%	-0.008	-0.113	2.91%	-0.002	-0.113	3.24%
Marital status	-0.006	-0.017	0.43%	-0.001	-0.017	0.78%	-0.008	-0.017	0.31%	-0.005	-0.017	0.69%	-0.001	-0.017	0.06%	-0.010	-0.017	3.14%
Gender	0.087	0.007	2.59%	0.004	0.007	1.46%	0.077	0.007	1.27%	0.135	0.007	8.35%	0.057	0.007	1.29%	0.083	0.007	10.76%
Early-life factors																		
Mother literate	0.005	0.185	3.68%	0.001	0.185	5.57%	0.006	0.185	2.65%	0.002	0.185	3.73%	0.009	0.185	5.09%	0.000	0.185	0.05%
Father literate	0.018	0.065	4.86%	0.002	0.065	7.15%	0.033	0.065	4.93%	0.009	0.065	4.89%	0.012	0.065	2.48%	0.008	0.065	9.14%
Childhood health																		
Average	-0.014	-0.015	0.86%	0.000	-0.015	0.14%	-0.008	-0.015	0.30%	-0.011	-0.015	1.38%	-0.043	-0.015	2.07%	-0.011	-0.015	3.12%
Worse	-0.006	-0.023	0.57%	0.000	-0.023	0.51%	-0.003	-0.023	0.17%	-0.006	-0.023	1.16%	-0.013	-0.023	0.93%	-0.010	-0.023	4.22%
Severe illness before 16	-0.001	-0.001	0.00%	0.000	-0.001	0.01%	-0.001	-0.001	0.00%	0.000	-0.001	0.00%	-0.001	-0.001	0.00%	-0.001	-0.001	0.02%
Severe illness after 16	-0.007	0.009	-0.26%	-0.004	0.009	-1.73%	-0.004	0.009	-0.08%	-0.005	0.009	-0.40%	-0.008	0.009	-0.24%	-0.013	0.009	-2.16%
Vaccine deficiency	-0.006	-0.085	2.01%	0.000	-0.085	0.06%	-0.012	-0.085	2.27%	-0.003	-0.085	2.08%	-0.003	-0.085	0.87%	-0.001	-0.085	1.02%
Physician deficiency	-0.003	-0.079	1.03%	0.000	-0.079	-0.83%	-0.004	-0.079	0.75%	-0.001	-0.079	0.52%	-0.006	-0.079	1.57%	-0.003	-0.079	4.03%
Healthy activity	0.015	0.081	5.00%	0.001	0.081	4.42%	0.028	0.081	5.35%	0.005	0.081	3.49%	0.011	0.081	2.87%	0.007	0.081	9.63%
Starvation																		
1	-0.004	-0.008	0.12%	0.001	-0.008	-0.41%	-0.002	-0.008	0.04%	-0.001	-0.008	0.05%	-0.012	-0.008	0.29%	-0.012	-0.008	1.78%
2	0.000	-0.007	0.01%	0.001	-0.007	-0.21%	0.002	-0.007	-0.02%	0.001	-0.007	-0.04%	-0.006	-0.007	0.13%	-0.003	-0.007	0.34%
3	-0.008	-0.063	2.12%	0.000	-0.063	-0.13%	-0.012	-0.063	1.80%	-0.002	-0.063	1.32%	-0.011	-0.063	2.25%	-0.012	-0.063	13.69%
Famine	0.012	-0.011	-0.56%	0.004	-0.011	-2.07%	0.025	-0.011	-0.66%	0.017	-0.011	-1.62%	-0.015	-0.011	0.51%	0.002	-0.011	-0.40%
Famine death in family	-0.001	-0.022	0.06%	0.001	-0.022	-0.62%	-0.001	-0.022	0.05%	0.001	-0.022	-0.17%	-0.001	-0.022	0.09%	-0.004	-0.022	1.59%
Family SES in childhood																		

2	0.006	0.000	0.00%	0.001	0.000	0.01%	0.007	0.000	0.00%	0.002	0.000	0.00%	0.007	0.000	0.00%	0.007	0.000	0.02%
3	0.003	0.142	1.60%	0.000	0.142	1.06%	0.004	0.142	1.17%	0.000	0.142	-0.36%	0.005	0.142	2.30%	0.003	0.142	7.93%
Neighbourhood quality																		
1	-0.003	-0.017	0.24%	-0.001	-0.017	0.70%	-0.004	-0.017	0.17%	0.000	-0.017	-0.07%	-0.009	-0.017	0.50%	-0.004	-0.017	1.14%
2	-0.002	-0.059	0.55%	0.000	-0.059	-0.04%	-0.004	-0.059	0.51%	-0.001	-0.059	0.61%	-0.002	-0.059	0.46%	-0.001	-0.059	0.83%
3	-0.001	-0.085	0.45%	0.000	-0.085	1.69%	-0.002	-0.085	0.33%	-0.001	-0.085	0.69%	-0.001	-0.085	0.29%	-0.001	-0.085	0.95%
Friendship deficiency																		
1	-0.012	-0.045	2.17%	-0.002	-0.045	4.73%	-0.017	-0.045	1.81%	-0.006	-0.045	2.19%	-0.013	-0.045	1.79%	-0.006	-0.045	4.57%
2	-0.004	-0.070	1.17%	0.000	-0.070	0.68%	-0.006	-0.070	1.02%	-0.001	-0.070	0.90%	-0.004	-0.070	0.93%	-0.004	-0.070	5.14%
3	-0.001	-0.060	0.28%	0.000	-0.060	0.20%	-0.001	-0.060	0.17%	0.000	-0.060	0.17%	-0.001	-0.060	0.25%	-0.002	-0.060	1.76%
Mother mental health problem	-0.002	-0.022	0.14%	0.001	-0.022	-0.83%	-0.002	-0.022	0.08%	0.003	-0.022	-0.59%	-0.001	-0.022	0.04%	-0.013	-0.022	5.23%
Father mental health problem	-0.006	-0.033	0.88%	-0.001	-0.033	1.28%	-0.008	-0.033	0.62%	-0.004	-0.033	1.07%	-0.007	-0.033	0.72%	-0.005	-0.033	3.25%
Domestic violence																		
1	0.001	0.023	0.08%	0.000	0.023	-0.11%	0.001	0.023	0.08%	0.002	0.023	0.35%	-0.001	0.023	-0.10%	-0.003	0.023	-1.47%
2	0.000	0.021	0.03%	0.000	0.021	0.16%	0.002	0.021	0.07%	0.001	0.021	0.26%	-0.003	0.021	-0.17%	-0.005	0.021	-1.82%
3	0.000	0.017	0.00%	0.000	0.017	0.04%	0.000	0.017	-0.01%	0.001	0.017	0.09%	0.000	0.017	0.01%	-0.001	0.017	-0.20%
Mentorship support	0.005	0.065	1.44%	0.001	0.065	3.95%	0.010	0.065	1.53%	0.003	0.065	1.52%	0.006	0.065	1.14%	-0.001	0.065	-0.98%

Note: elas. means elasticity for the modified concentration index (con. index); per. means the percent of the determinant's contribution to the modified concentration index; for the categorical variables, 0 denotes the lowest level, and 3 denotes the highest level; SES was socioeconomic status; province fixed effect and wave fixed effect were also controlled.