

Later-life Health Trajectories in China: The Role of Childhood, Adult, and Current Community Socioeconomic Conditions

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Early-life socioeconomic status (SES) shapes trajectories of health

- Increased risk of heart attacks and chronic conditions
- More functional limitations
- Unhealthy behaviors
- Poorer mental health

Evidence from China

Wen and Gu (2011)

- Activities of daily living (ADL) limitations
- Self-rated health
- Cognition

Chinese Longitudinal Healthy Longevity Study
(CLHLS)

Life course theoretical perspective

- Direct and indirect mechanisms
- Biological scarring
- Cumulative disadvantage
- Age-as-leveler hypothesis

Research Questions

1. Does childhood SES, adult SES, and current community SES shape trajectories of health among older adults in China?
2. If so, do these disparities diverge, converge, or persist over age?

Contributions

1. Two different dimensions of health
 - Depressive symptoms
 - Functional limitations
2. Lifetime SES: simultaneously examine childhood, adult, and current community SES
3. Middle-aged adults (45-64)

CHARLS Data

- Chinese Health and Retirement Longitudinal Study
 - Three waves: 2011, 2013, 2015
- Family Life History Survey (2014)
- Respondents residing in same community 2011-2015
- Sample: 7,978 respondents living in 434 communities
 - Men: 3,639
 - Women: 4,339

Dependent Variables

1. Functional limitations

- Scale 0-6
- Walk 1 km, stoop, get up from chair, climb stairs, lift heavy object, reach arms above head

2. Depressive symptoms

- Scale 0-30
- Mini-mental state examination
- 10 questions about feeling in last week

Independent Variables

- Childhood SES (2014 Life History Survey):
 - Family “much worse off” compared to other families
 - Father’s occupation (agriculture=1)

- Adult SES (measured in 2011):
 - Education (at least 1 year =1)
 - Monthly household per-capita expenditure (PCE) (logged)

Current community SES (measured in 2011):

1. Financial situation of this village/community 1 (poor) → 7 (rich)
 2. Degree of tidiness 1 (very dirty) → 7 (very tidy)
 3. Construction of structures 1 (very disorganized) → 7 (very organized)
 4. Degree of handicap access 1 (no access) → 7 (convenient access)
 5. Degree of Mandarin fluency 1 (cannot speak) → 7 (fluent)
- Scale 0-30 (Cronbach alpha = 0.75)
 - Quartiles by rural and urban

Control Variables & Methods

Control variables (measured in 2011)

- Age, age-squared, and marital status (married =1)

Methods

- Growth curve models over age
- Robust standard errors clustered at community level
 - Model 1: childhood SES + controls
 - Model 2: Model 1 + adult SES
 - Model 3: Model 2 + current community SES
- Interactions between all SES measures and age

Depressive symptoms: Males

N=3,639	Model 1	Model 2	Model 3
	<u>b (robust se)</u>	<u>b (robust se)</u>	<u>b (robust se)</u>
Family SES Poor	1.47 (0.18)**	1.18(0.18)**	1.14 (0.18)**
Father's work agriculture	0.78 (0.18)**	0.33(0.19) [†]	0.31 (0.18) [†]
1+ years educ (ref: none)		-1.23(0.20)**	-1.08 (0.20)**
Household PCE (log)		-0.78(0.11)**	-0.69 (0.12)**
Community SES (ref: 1st)			
2nd			-0.26 (0.30)
3rd			-0.76 (0.29)*
4th			-1.05 (0.29)**

[†]p < 0.10 *p < 0.05 **p < 0.01

Depressive symptoms: Females

N=4,339	Model 1	Model 2	Model 3
	<u>b (robust se)</u>	<u>b (robust se)</u>	<u>b (robust se)</u>
Family SES Poor	2.14 (0.21)**	1.82(0.21)**	1.80 (0.21)**
Father's work agriculture	1.44 (0.20)**	0.61(0.19)**	0.59 (0.19)**
1+ years educ (ref: none)		-1.09(0.19)**	-1.06 (0.19)**
Household PCE (log)		-1.32(0.11)**	-1.26 (0.11)**
Community SES (ref: 1st)			
2nd			-0.31 (0.29)
3rd			-0.39 (0.35)
4th			-0.76 (0.34)**

†p < 0.10 *p < 0.05 **p<0.01

Functional limitations

N=7,978	Males	Females
	<u>b (robust se)</u>	<u>b (robust se)</u>
Family SES Poor	0.23 (0.05)**	0.26 (0.05)**
Father's work agriculture	-0.02 (0.05)	0.07 (0.05)
1+ years educ (ref: none)	-0.21 (0.20)**	-0.12 (0.05)*
Household PCE (log)	-0.19 (0.03)**	-0.21 (0.03)**
Community SES (ref: 1st)		
2nd	-0.09 (0.07)	-0.11 (0.08)
3rd	-0.07 (0.07)	-0.02 (0.07)
4th	-0.09 (0.07)	-0.17 (0.33)*

†p < 0.10 *p < 0.05 **p < 0.01

Discussion

1. Does childhood SES, adult SES, and current community SES shape trajectories of health among older adults in China?
2. If so, do these disparities diverge, converge, or persist over age?

Implications of the findings

- 330 million Chinese will be 60 years and older by 2050
- Childhood SES exerts long-term impacts on health
 - Independent of adult and current community SES
- Adult and current community SES exert additional health impacts
- SES disadvantages emerge early in the life course
- Policies should be aimed at reducing SES disparities early in life

Thank you