

Harmonization of  
Methods & Measures in  
Longitudinal Studies  
Study Descriptions

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Study Name: **Chinese Health and Retirement Longitudinal Study (CHARLS)**

<b>Topic Areas</b>	<b>Available Measures</b>
Well-Being	Life as a whole, how satisfied? Likert scale
Time Use	Time respondent contact with mother, father, mother in law, father in law; time use in physical activities: strenuous, moderate, walking; time others spent taking care of respondent; frequency of social activities (playing ma-jong, interact with friends, volunteer activities, etc.)
Disability	Physical, mental retardation, vision, hearing, speech; dates started
Cognition	Word recall, TICS, successive subtraction by 7s from 100, copy picture
Sleep	Average hours of sleep in last 1 month; Minutes of nap after lunch in last 1 month; trouble with sleep in last month (part of CES-D 10); sleep 1 domain in health vignettes; taking sleeping pills
Neighborhoods	Detailed community survey
Childhood Health	General health before age 16
Childhood (other – specify domains)	Community born, community where mainly lived before age 16, first Hukou status, age started school and finished school,
Stress (interpret broadly)	CES-D 10; social activities, smoking, drinking

Study Name: **English Longitudinal Study of Ageing (ELSA)**

**Bold = objective measures**

Wave 1 2002; Wave 2 2004; Wave 3 2006; Wave 4 2008; Wave 5 2010.

Topic Areas	Available Measures
Well-Being	<ul style="list-style-type: none"> <li>• Quality of life scale (CASP-19) – Waves 1 to 5</li> <li>• General Health Questionnaire (GHQ 12) – Waves 1 and 2</li> <li>• Satisfaction-with-life scale (SWLS) – Waves 2 to 5</li> <li>• CES-D depression scale – Waves 1 to 5</li> <li>• Ryff wellbeing scale – Wave 2</li> <li>• HRS positive affect – Wave 5</li> <li>• Physician diagnosed emotional problems – Waves 1 to 5</li> </ul>
Time Use	<ul style="list-style-type: none"> <li>• Work – Waves 1 to 5</li> <li>• Caregiving – Waves 1 to 5</li> <li>• Social and cultural participation – Waves 1 to 5</li> <li>• Volunteering – Waves 1 to 5</li> <li>• TV watching – Waves 4 and 5</li> </ul>
Disability	<ul style="list-style-type: none"> <li>• ADLs ( 6 items) – Waves 1 to 5</li> <li>• IADLs (7 items) – Waves 1 to 5</li> <li>• Motor skills and strength (10 items) – Waves 1 to 5</li> <li>• <b>Physical performance:</b> Waves 2 and 4               <ol style="list-style-type: none"> <li>1. <b>gait speed</b></li> <li>2. <b>balance (side-by-side, semi-tandem and full tandem stands)</b></li> <li>3. <b>chair rises</b></li> <li>4. <b>leg raise (eyes open and shut)</b></li> <li>5. <b>grip strength</b></li> </ol> </li> </ul>
Cognition	<ul style="list-style-type: none"> <li>• Self-reported memory – Waves 1 to 4</li> <li>• <b>Orientation in time, word listing learning, prospective memory</b> – Waves 1 to 5</li> <li>• <b>Executive function (word-finding and letter cancellation)</b> – Waves 1 to 5</li> <li>• <b>Basic skills (literacy and numeracy)</b> – one off</li> </ul>
Sleep	<ul style="list-style-type: none"> <li>• Duration and disturbance – Wave 5</li> </ul>
Neighborhoods	<ul style="list-style-type: none"> <li>• Neighborhood social capital (9 statements measuring trust, mutual assistance and petty crime) – Waves 1 and 3</li> </ul>
Childhood Health	<ul style="list-style-type: none"> <li>• Life History data (health module) – One off</li> </ul>
Childhood (other – specify domains)	<ul style="list-style-type: none"> <li>• Life History data (children, partners, accommodation, work and other life events modules) – One off</li> </ul>
Stress (interpret broadly)	<ul style="list-style-type: none"> <li>• Work stress – Waves 1 to 5</li> <li>• Social isolation – Waves 1 to 5</li> <li>• Loneliness – Waves 1 to 5</li> <li>• Financial strain – Waves 1 to 5</li> <li>• Perceived discrimination – Wave 5</li> </ul>

Study Name: **Health and Retirement Study (HRS)**

Topic Areas	Available Measures
Well-Being	Single item life satisfaction (Campbell) 5-item SWLS (Diener) Domain satisfaction 7-items (Campbell) Positive Affect (PANAS-X) Negative Affect (PANAS-X) Psychological Well-being (Ryff) Job satisfaction (Multiple items) Financial satisfaction (multiple items) Health care satisfaction  Depressive symptoms (8-item CES-D) CIDI-SF Depression screening
Time Use	CAMS Time Roster (activity estimates for last week/last month)
Disability	ADLs (6); IADLs (6); Nagi (12) Self-report vision/hearing
Cognition	TICS; Immediate/delayed Word list recall; Vocabulary; Category fluency; Reasoning- Number series (adaptive);
Sleep	Minimal in Core
Neighborhoods	Macro-level indicators of neighborhood (state, ZIP code, census tract link, etc) Interviewer observations Evaluations of neighborhood environment quality and social cohesion (Chicago study)
Childhood Health	Retrospective reports of childhood illness, concussion, etc.
Childhood (other – specify domains)	Retrospective reports of childhood trauma, events before age 18; family environment; Quality of relationships with mother/father
Stress (interpret broadly)	Exposure to multiple life events [Unemployment; financial loss (gain); Residential mobility or relocation ; Household composition changes (e.g., parents or children moving in/departing) Marital breakdown, widowhood, death of parents, siblings, children, grandchildren Caregiving ] Experience of multiple chronic stressors (e.g., financial, Job-related, health, family conflicts) Job-Family balance Experience of everyday and work discrimination (Williams)

Study Name: **Indonesian Family Life Survey (IFLS)**

Topic Areas	Available Measures
Well-Being	Ladder question of income (6 rungs) today, 5 years ago, 5 years in future; life satisfaction (less than adequate, adequate, more than adequate), food consumption, health care, children's food consumption and health care; general happiness question (very happy, happy, unhappy)
Time Use	time use in physical activities: strenuous, moderate, walking; sitting; hours of person assisting respondent if needed
Disability	Physical, mental retardation, vision, hearing, speech; does condition limit activities?
Cognition	Word recall, part of TICS
Sleep	trouble with sleep in last month (part of CES-D 10); sleep 1 domain in health vignettes
Neighborhoods	Detailed community survey
Childhood Health	Adult height, lagged health measures from prior waves
Childhood (other – specify domains)	Community born, community where lived at age 12, subsequent moves for 6 months or more
Stress (interpret broadly)	CES-D 10; social activities, smoking

**Study Name: Korean Longitudinal Study of Aging (KLoSA)**

<b>Topic Areas</b>	<b>Available Measures</b>
<i>Well-Being</i>	Life Satisfaction (4 domain-specific <sup>1</sup> and life as a whole, 11-point scale); CESD (10-item, 4-point Likert scale);
<i>Time Use</i>	****No data
<i>Disability</i>	ADL(6 items); IADL (10 items); work-limiting health condition; grip strength
<i>Cognition</i>	Korean Mini Mental State Exam (K-MMSE), including 3 words immediate/delayed recall, orientation (naming dates), numeracy (i.e., serial 7s), copying a picture, writing a sentence, folding-paper exercise, etc.
<i>Sleep</i>	****No data
<i>Neighborhoods</i>	****No data
<i>Childhood Health</i>	****No data
<i>Childhood (other – specify domains)</i>	****No data
<i>Stress (interpret broadly)</i>	Divorce/widowhood; psychological and physical stress from work/employment

**Notes:**

1. Domains include: health; economic status; relationship with spouse and children

Study Name: **Longitudinal Aging Study in India (LASI)**

<b>Topic Areas</b>	<b>Available Measures</b>
<i>Well-Being</i>	Diener’s 5-item life satisfaction (7-point Likert scale); Domain-specific life satisfaction (5-point Likert scale) <sup>1</sup> ; CESD (20-item, 4-point Likert scale)
<i>Time Use</i>	****No data
<i>Disability</i>	ADL(6 items); physical performance (walking test, balance, grip strength); anchoring vignettes; work limiting health condition/disability;
<i>Cognition</i>	10-word immediate/delayed recall, verbal fluency (animal naming), numeracy (i.e., serial 7s, backward counting), orientation (i.e., naming dates, naming prime minister), computation (i.e. two “real world” math problems); proxy cognition <sup>2</sup> ; anchoring vignettes
<i>Sleep</i>	Anchoring vignettes
<i>Neighborhoods</i>	Physical and social neighborhood characteristics (water source, sewer system; how well the neighborhood is maintained, how often neighbors work together, can be trusted); satisfaction with neighborhoods
<i>Childhood Health</i>	Self-report childhood health <sup>3</sup>
<i>Stress (interpret broadly)</i>	divorce/widowhood; social isolation; psychological and physical stress from work/employment

Notes:

1. Domains include: the condition with house; the condition of neighborhood; village, city or town; daily life and leisure activities; family life; relationship with spouse; relationship with children; financial situation; health; life as a whole.

2. Proxy-respondents are asked to answer questions about the respondent’s memory, orientation, and behaviors.

3. The question reads: “Consider your health while you were growing up, from birth to age 16. Would you say that your health during that time was excellent, very good, good, fair, or poor?”



Study Name: **MacArthur Study of Successful Aging**

**Bold face = non-self report data;** all other data are self-report

Topic Areas	Available Measures
Well-Being	Life satisfaction (5 domains)
Time Use	*** No data
Disability	ADL (7 items); Nagi (5 items); <b>physical performance (walking, balance, grip strength)</b>
Cognition	<b>Pfeiffer; Verbal/non-verbal memory; Naming;</b>
Sleep	*** No data
Neighborhoods	*** No data
Childhood Health	*** No data
Childhood (other – specify domains)	*** No data
Stress	Divorce/widowhood; social isolation; social conflict;

Study Name: **Mid-life in the United States (MIDUS)**

Topic Areas	Available Measures*
Well-Being	Meaningfulness of society Social integration Acceptance of others Social contribution Social actualization Sum major chronic conditions (M1/M2/P4) Self-rated physical health Self-rated emotional health
Time Use	Volunteer/attend social groups Give/receive advice/support Sum hours volunteering Sum hours attend group meetings
Disability	Intermediate activities of daily life Basic activities of daily life
Cognition (P3)	Immediate/delayed recall Digits backward Category fluency Number series Backwards count BTACT composite score Executive Function factor score Memory factor score Stop-and-Go accuracy measures Stop-and-Go Latency measures Stop-and-Go costs measures
Sleep (P4)	Subjective sleep quality Sleep latency Sleep duration Habitual sleep efficiency Sleep disturbance Use of sleep medications Global sleep scale
Neighborhoods	Contact with neighbors Converse/socialize with neighbors Years living in current neighborhood Own, rent home Perceived neighborhood quality Perceived inequality
Childhood Health	Physical health at age 16 (M1 only) Emotional health at age 16 (M1 only) Family violence/childhood abuse (M1 only)
Childhood (other – specify domains)	Maternal affection, discipline, generosity (M1 only) Paternal affection, discipline, generosity (M1 only)

	Parents' affection (M1 only) Childhood background: welfare, ADC (M1 only)
Stress (interpret broadly)	Depression Generalized Anxiety Disorder Panic attack Negative affect Positive affect Psychological well-being: self acceptance Psychological well-being: purpose in life Psychological well-being: environmental mastery Psychological well-being: positive relations Psychological well-being: personal growth Psychological well-being: autonomy Personal mastery Friends positive/negative scale Extended family positive/negative scale Perceived inequality in family Marital risk scale Spouse critical Life Satisfaction (M2 only) Self-esteem (M2 only) Well-being (M2 only) Optimism (M2 only) Pessimism (M2 only) Demands scale (M2 only) Chronic job strain (M2 only) Lifetime discrimination (M2 only) Daily discrimination (M2 only) Mood and Symptom Questionnaire (MASQ): general distress (P4 only) Mood and Symptom Questionnaire (MASQ): anxious symptoms (P4 only) Mood and Symptom Questionnaire (MASQ): loss of interest (P4 only) Mood and Symptom Questionnaire (MASQ): anxious arousal (P4 only) Mood and Symptom Questionnaire (MASQ): high positive affect (P4 only) CES-D (P4 only) Perceived stress (P4 only) Spielberger Trait Anxiety (P4 only) Childhood trauma: emotional abuse (P4 only) Childhood trauma: physical abuse (P4 only) Childhood trauma: sexual abuse (P4 only) Childhood trauma: emotional neglect (P4 only) Childhood trauma: physical neglect (P4 only)

\*All measures available at M1 and M2, unless otherwise specified

Study Name: **National Health and Aging Trends Study (NHATS):**

**Bold face = non-self report data;** all other data are self-report

Topic Areas	Available Measures
Well-Being	<ul style="list-style-type: none"> <li>• Feelings in last month: cheerful/bored/full of life/upset</li> <li>• 4 Statements about life (agree a lot/little/not at all): e.g. life has meaning and purpose</li> <li>• Age person felt in last month?</li> <li>• 3 Statements about self-efficacy/resilience(agree a lot/little/not at all): e.g. others determine what I can do</li> <li>• Depression: PHQ2</li> <li>• Anxiety: GAD2</li> </ul>
Time Use	7 stylized time use measures (any participation last month)
Disability	<ul style="list-style-type: none"> <li>• Activity Limitations: Self-Care (4) Household Activities (4) Medical Care Activities (2: handling medications/medical care) Mobility (inside/outside) Transportation</li> <li>• Participation Restrictions (7)</li> <li>• <b>Physical Capacity/Impairments:</b> <b>Lower &amp; upper extremity performance-based assessments (balance, walking, grip strength, chair stands, peak air flow);</b> Nagi items (6 high/6 low functioning); Hearing/vision items</li> <li>• Accommodations: devices, environmental modifications, personal help, behavior modifications</li> </ul>
Cognition	<ul style="list-style-type: none"> <li>• <b>Assessments:</b> <b>10 word immediate and delayed word recall</b> <b>Day of week &amp; Date (Mo,DayYr)</b> <b>Naming President (first/last)</b> <b>Naming Vice President (first /last)</b> <b>Clock-drawing test</b> <b>Stroop test (Carlson computerized)[introduce at wave 2]</b></li> <li>• Proxy measures:</li> </ul>

	<p>AD8 (Dementia screening questions on changes in thinking/memory)</p> <p>4 Behaviors: e.g. hears/sees things</p> <ul style="list-style-type: none"> <li>• 3 Self ratings: present memory/interferes with activities/compared to 1 year ago</li> </ul>
Sleep	<p>3 items: last month how often more than 30 minutes to go to sleep/trouble going back to sleep when woke up/take medication for sleep</p>
Neighborhoods	<p>3 items (agree a lot, little, not at all): people know each other well/willing to help each other/can be trusted)</p>
Childhood Health	<p>1 item: health as a child was excellent, very good, good, fair or poor</p>
Childhood (other – specify domains)	<ul style="list-style-type: none"> <li>• State of birth <ul style="list-style-type: none"> <li>If not US born, age came to live in US</li> </ul> </li> <li>• Family financial status (growing up)</li> <li>• Live with both parents up to age 15</li> <li>• City/town lived at age 15</li> </ul>
Stress (interpret broadly)	<ul style="list-style-type: none"> <li>• Divorce/widowhood at baseline and over time</li> <li>• Anxiety: GAD2</li> <li>• Economic wellbeing: debt; family financial transfers; food insecurity</li> <li>• Health restrictions in participation in valued activities (from Participation Restrictions section)</li> <li>• Social isolation (no one to talk to from social network)</li> </ul>

Study Name: **National Social Life, Health and Aging Project (NSHAP)**

<b>Topic Areas</b>	<b>Available Measures</b>
Well-Being	Depression (CESD), Anxiety (HADS)
Time Use	None
Disability	ADL (5 items), mobility (2 items), driving (2 items), Get Up and Go (Wave 1), Short Physical Performance Battery (Wave 2)
Cognition	SPMSQ (Wave 1), MoCA (Wave 2)
Sleep	Self-report items on sleep amount and quality, Actigraphy (Wave 2, 3 nights)
Neighborhoods	Self-reported years of residency and collective efficacy, field interviewer description of neighborhood
Childhood Health	Self-reported health growing up
Childhood (other – specify domains)	Nativity, happiness of childhood family life, parents' educational attainment, financial status growing up, childhood household composition
Stress (interpret broadly)	4 perceived stress items from HRS, bereavement and marital/relationship dissolution, salivary cortisol (3 samples)

Study Name: **Panel Study of Income Dynamics (PSID)**

<b>Topic Areas</b>	<b>Available Measures</b>
Well-Being	K6 Psychological distress – 30 day <sup>1</sup> Life satisfaction – overall <sup>1</sup> Emotional, nervous, psychiatric disorder- lifetime (severity; specific diagnosis, onset and recency) <sup>2</sup> Experienced wellbeing <sup>3</sup>
Time Use	Housework, volunteering, working <sup>2</sup> 24-hour time diaries <sup>3</sup> Stylized time use measures (days participated last week) <sup>3</sup>
Disability	Physical or nervous condition that limits work? (severity of limitation) <sup>2</sup> 7 ADLs (difficulty, help, equipment use) <sup>2</sup> 6 IADLs (difficulty, help) <sup>2</sup> Impairments/symptoms, use of assistive technology, 6-item ACS <sup>3</sup>
Cognition	Sentence completion test (1972 only) <sup>1</sup> Permanent loss of memory or mental ability diagnosis-lifetime (severity; specific diagnosis, onset and recency) <sup>2</sup> Self-assessed memory, change since last year <sup>3</sup>
Sleep	Quality of sleep night before diary and night before interview <sup>3</sup>
Neighborhoods	Through geospatial linkages
Childhood Health (retrospective)	Childhood health diseases of head and spouse (before age 17) <sup>4</sup> Overall health status <sup>4</sup> Whether missed school a month or more due to a health problem <sup>4</sup> Whether had, and if yes, start age and end age (or still ongoing) for list of conditions <sup>4,5</sup>
Childhood (other – specify domains; retrospective) <sup>7</sup>	Parental smoking behavior <sup>4</sup> Parental marital/relationship separations (timing) <sup>4</sup> Childhood residential transitions (timing) <sup>4</sup> Childhood school changes (timing) <sup>4</sup> Whether lived with both natural parents as a child <sup>6</sup> Occupation of mother and father when growing up <sup>6</sup> Economic wellbeing of family when growing up <sup>6</sup> Years of education completed <sup>6</sup> Years of education of parents completed <sup>6</sup> Number of siblings and whether still living <sup>6</sup> Whether grew up in urban, rural environment <sup>6</sup>
Stress (interpret broadly)	Stressful life events can be identified over the life course – e.g. divorce, death, moves, health shocks, parental separations, military service, job loss, business loss, net worth loss, mortgage distress, foreclosures <sup>2</sup>

<sup>1</sup>Asked of all Respondents in core PSID

<sup>2</sup>Assessed for all Heads and Wives in core PSID

<sup>3</sup>Assessed for Heads and Wives in the 2009 Disability and Use of Time (DUST) supplement administered to 400 couples ages 60 and older

<sup>4</sup>Childhood health section (originally assessed for all Heads and Wives, now new Heads and Wives and those for whom only a proxy report was previously obtained)

<sup>5</sup>Childhood conditions include measles, mumps, chicken pox, difficulty seeing even with glass or prescription lenses, diabetes, respiratory disorder, speech impairment, allergic condition, heart trouble, chronic ear problems or infections, epilepsy or seizures, severe headaches or migraines, stomach problems, high blood pressure, depression, drug or alcohol problems, other emotional or psychological problem

<sup>6</sup>New Heads/Wives section (K/L)

<sup>7</sup>For many adults, PSID has prospective measures of family economic and social conditions during childhood. Measures include income, poverty, housing characteristics, where they lived, and detailed information about parents.



Study Name: **Survey of Health, Ageing, and Retirement in Europe (SHARE)**

Topic Areas	Available Measures
Well-Being	CASP-12 (Self-rated health)
Time Use	(Planned for wave 5) Timed key strokes
Disability	- ADL (10 items), - IADL (13 items), - performance measures (walking speed, peak-flow, chair stand, grip strength) - questions on disability insurance
Cognition	- SELF-RATED READING SKILLS - SELF-RATED WRITING SKILLS - DATE - DAY, MONTH, YEAR - TEN WORDS LIST - VERBAL FLUENCY (ANIMAL NAMES) - NUMERACY (CHANCE DISEASE 10 PERC. OF 1000; HALF PRICE; 6000 IS TWO-THIRDS WHAT IS TOTAL PRICE; AMOUNT IN THE SAVINGS ACCOUNT)
Sleep	- MH007_ TROUBLE SLEEPING (item from EURO-D) - Q4c_ My sleep was restless (item from CES-D)
Neighborhoods	- AREA FACILITIES - AREA PUBLIC TRANSPORTATION - AREA POLLUTION NOISE OR OTHER PROBLEMS - AREA VANDALISM OR CRIME - personal/practical help from neighbors
Childhood Health	- HEALTH STATUS - MISSED SCHOOL FOR 1 MONTH+ - IN HOSPITAL FOR 1 MONTH+ - ILLNESSES - Childhood illnesses (list of common diseases + open ended Q; age, duration of condition) - Vaccinations during childhood - Dental care/dentist visits - Vision test - START OF MENSTRUAL PERIOD - BEHAVIORAL RISK PARENTS (parents smoking, drinking, mental health problems)
Childhood (other – specify domains)	SHARELIFE: - Childhood accommodation - Childhood SES
Stress (interpret broadly)	- Effort Reward Imbalance (work, social network), - EURO-D, - CES-D, - Work Quality (SHARELIFE) - Widowhood/divorce - Disagreements/conflicts - Job satisfaction, - advancement possibilities, - adequate salary

Study Name: **Wisconsin Longitudinal Study (WLS)**

Topic Areas	Available Measures
Well-Being	Personality (Big Five); Ryff Scale of Psychological Well (autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance); CESD; Depression History
Time Use	N/A
Disability	ADL/IADL/NAGI functional limitation (8 items) /Anthropometric Measures (lung capacity, chair stand, timed gait, grip strength); Employment Disability; Health Utility Index 3
Cognition	Administrative Henmon-Nelson IQ score/Similarity items(WAIS-R)/Abstract reasoning(WAIS-R+WAIS-III)/Verbal Fluency/Verbal Memory (delayed and immediate)/Working Memory (numeracy)/Single Word Reading/Word Recognition/Picture Naming/Category Verification/Cookie Theft (aphasia, dementia, spontaneous speech)
Sleep	Trouble sleeping/Trouble falling asleep/Sleep apnea
Neighborhoods	N/A
Childhood Health	General Health, Major Health Conditions (Asthma, Diphtheria, Hepatitis, Polio, Whooping Cough, Mono, Meningitis, Pneumonia, etc.) ; Major debilitating illnesses (missed 6 months or more of school)
Childhood (other – specify domains)	Education(high school rank, coursework, aspirations)/Parental SES (occupation, income, education)/Cognition (Henmon-Nelson)/Childhood Abuse/
Stress (interpret broadly)	Stressful Life Events (widowhood, divorce, job loss, employment changes, parental death, violence, major health problems, child death, child disability/mental illness, marital quality)