Longitudinal Ageing Study in India (LASI)

Titchfield Group Meeting on Age and Age Disaggregated Data, 26-27 June, 2018

Age Disaggregated Data from Multi-cultural Setting from 36 States of India

Supported By -

Ministry of Health and Family Welfare (MoHFW), Govt. of India
National Institute on Aging (NIA)/ National Institutes of Health (NIH), USA
The United Nations Population Fund (UNFPA)
# About LASI Project

<table>
<thead>
<tr>
<th>1. Project Title</th>
<th><strong>Longitudinal Ageing Study in India (LASI)</strong></th>
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<td>2. Project duration</td>
<td>Main Wave I and II : 2016 to 20121</td>
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<td>3. Project approval date</td>
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| 4. Financial Sponsors | • Ministry of Health and Family Welfare (MoHFW), NCD Division, Government of India  
• National Institute on Ageing (NIA)/ National Institute of Health (NIH), USA  
• The United Nations Population Fund (UNFPA), India |
| 5. Nodal Agency for LASI | **International Institute for Population Sciences** |
| 6. Collaborating Institutions | National Collaborative Institutions  
• **Regional Geriatric Centers** under NCD division, Ministry of Health and Family Welfare, GOI  
• **National AIDS Research Institute** (NARI), Pune  
International Collaborative Institutions  
• Harvard School of Public Health (HSPH)  
• University of Southern California (USC)  
• University of California, Los Angeles, USA (UCL) |
With 1.21 billion 2011 census, currently the 60+ population accounts for 9% of India’s national population, translating into roughly 103 million older people in age 60+

Between 2011 and 2050, the number of older people in age 60+ will raise to 340 million.

Including the preretirement phase i.e., the 45+ population, the proportion will rise to over 30%, or more than 600 million people in 2050.

The old-age support ratio (the number of persons aged 15 to 64 per person aged 65 or older) will also fall dramatically from 13 to 5.
LASI is designed to cover three major subject and policy domains of adult and older population of India namely:

- Health: Disease burden & risk factors (reported and measured), Functional Health, Cognition and Mental Health and Health care and health care financing (MoHFW)
- Economic: Housing and Environment, income, wealth and expenditure, Work, Pension, Retirement (MoSJE)
- Social: Family, social network, and social welfare programmes (MoSJE)

Objective

The largest ever longitudinal ageing study comprises:

- Comprehensive subject coverage: Health, Economics, Sociology of Ageing Transition
- Comprehensive Biomarkers direct health examination
- Use of Computer Assisted Personal Interview (CAPI)
- More IT based technologies including Geographic information system (GPS), and barcode technology for matching and anonymizing data

LASI Innovations

Scientific Innovation

Gold Standard Survey Protocols and State of Art Technologies

Interconnected and Globally Harmonized Data
Representativeness

- National estimates
- State estimates (30 states and 6 UTs)

Study Population

- All persons (men and women) aged 45 and above and their spouses irrespective of ages
- Households with at least one person aged 45+, will cover all age eligible persons in LASI age eligible households

Panel Sample size

- **61,000** individuals aged 45 and above and their spouses **including**
  **30,500** elderly persons aged 60+ and **6000** oldest-old persons aged 75+

Study design

- Longitudinal - 25 years; **First two waves during 2016-20**
- Follow up Interview - every 2 years **until 2040**
LASI main wave sampling plan for a total size of 61,000 completed interviews with representative sample for India and 30 states and 6 union territories

<table>
<thead>
<tr>
<th>State/cities</th>
<th>Population (census, 2011) (in millions)</th>
<th>Number of Regions in state</th>
<th>Number of PSUs (tehsils/taluks)</th>
<th>Fixed number of SSUs (villages/city wards) from each PSU</th>
<th>Total Number of SSUs (villages/city wards)</th>
<th>Fixed number of targeted households from each SSU</th>
<th>Number of households</th>
<th>Number of targeted interviews of individuals aged 45+ and their spouses less than 45 years</th>
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**Note:** Total population of India is 1211 millions (Census of India, 2011)  * UTs do not have any regions
Survey Implementation Process

- State-wise Field Agencies for Survey Implementation
- Two-phase survey implementation to maximize resources and operational efficiency
- Translation of Survey Schedules in 18 State Languages
- Two-stage Training of Trainers Workshops
- Multi-stage Quality control
- 3-Tier Supervision and monitoring
LASI Instrument

1. Household Schedule
   - Household Roster
   - Household Housing and Environment
   - Household Consumption
   - Household Assets and Debts
   - Household Income
   - Household Health Insurance

2. Individual Schedule
   - Demographics
   - Family and Social Network, Social Activities and welfare programmes
   - Health:
     - Disease and Health Conditions
     - Functional Health and Helpers
     - Family Medical History
     - Mental Health: Cognition and Depression
     - Health Behavior
   - Biomarker Collection
   - Health Care Utilization
   - Work and Employment
   - Retirement and Pension
   - Experimental modules:
     - Time use and well-being
     - Expectations
     - Social Connectedness
     - Vignettes

3. Community Schedule (Rural and Urban)
   - Population and Socio-economic characteristics
   - Infrastructures facilities: Public, Health, Education, transportation etc.
   - Social and Welfare Programmes

Three Schedules
**MORBIDITY**

### Diagnosed Chronic Disease
- Hypertension
- Diabetes/High Blood Sugar
- Cancer
- Lung diseases
- Heart disease
- Stroke
- Bone/joint diseases
- Psychiatric Conditions
- High Cholesterol

### Other Conditions
- Urogenital
- Eyesight
- Hearing
- Oral health
- Health event: Injury/fall and Disaster
- Angina, Sleep, Pain
- Symptoms

### Endemic Diseases
- Malaria, Dengue, Diarrhea, Chikungunya, Hepatitis B, Typhoid, Tuberculosis, Anaemia, Jaundice etc.

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### MENTAL HEALTH

#### Cognition
- Orientation
- Immediate and delayed memory
- Concentration and calculation
- Drawing
- Proxy Cognition

#### Depression
- CESD
- CIDI

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### FUNCTIONAL HEALTH AND HELPERS

- Activities of Daily living
- Instrumental activities of daily living
- Mobility
- Aids/supportive devices
- Individual care giver/helpers

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### WOMEN'S HEALTH

- Menstrual related health problems
- Hysterectomy and reasons for hysterectomy
- PAP smear test and breast examination

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### IMMUNIZATION

- Hepatitis B, Pneumococcal, Influenza Typhoid etc.

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### FAMILY MEDICAL HISTORY

- Chronic conditions: Hypertension, Diabetes, Heart disease etc.
- Birth Defects and Congenital disorders

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### HEALTH BEHAVIOR

- Smoking
- Alcohol
- Physical Activities
- Food Insecurity
- Availability of food at household level

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### HEALTH CARE UTILIZATION AND HEALTH PROMOTION

- Health Care Utilization in the past 12 months
- Health Insurance
- Last Hospitalization
- Most Recent Outpatient Visit
- Cost for treatment
**LASI Biomarkers: Direct Health Examination**

**Functional Health Markers**
- Blood Pressure and Pulse rate (CVD)
- Lung Function Test (OAD/Respiratory diseases)
- Vision Test: Near and Distance visual acuity

**Anthropometric Measurements**
- Height
- Weight
- Waist Circumference
- Hip Circumference
- BMI
- WHR

**Dried Blood Spot (DBS) based Markers**
- C-reactive Protein (CRP) (CVD)
- Epstein Bar virus/ Cytomegalovirus (EBV/CMV) (Immunity)
- Glycosylated Hemoglobin (HbA1c) (Diabetes)
- Hemoglobin (Hb) (Anaemia)
- Cystatin C (Kidney disease)
- Vitamin D (Bone disease)

**Performance Based Markers**
- Grip Strength
- Timed-walk
- Balance test (Cerebellar function)
- Frailty
LASI Key Domains: Economic Section
Household Questionnaire

### Household Income
- Agricultural Income from HH’s Own Farm/Fishery/Forestry
- Non-agricultural Business Income
- Individual Earnings
- Household Income from Government Transfers, Private Transfers and any other HH income

### Assets & Debts
- Agricultural Assets: Farming Equipment, Livestock
- Personal Loans
- Non-financial assets, Financial assets
- Debts:
  - Sources of loan
  - Purpose of loan
  - On whose name the loan is
  - Year of loan & amount of loan
  - Current outstanding loan
  - Interest rate of loan taken
  - Loan requested denied
  - Reverse Mortgage

### Household Consumption
- Consumption on food items (during the last 7 days)
- Expenditure on non-food items (during the last 30 days and 12 months)

### Household Health Expenditure
Outpatient, 30 days:
- Medical investigations
- Medicines
- Consultancy charges
- Other medical expenses (travel, ambulance, dental care, nursing home etc.)

Inpatient, 12 months:
- Hospitalization and nursing home stays
- Medical investigations
- Medicines
- Consultancy charges

### Public Subsidy and Ration Card/BPL Card

### Housing & Environment
- Housing
- Toilet facilities
- Water Supply
- Utilities
- Cooking & Indoor pollution
- House construction material

### Housing

### Household Consumption

### Assets & Debts
LASI KeyDomains: Economic Section
Individual Questionnaire

**Work**
- Ever Worked & Current Work
- Characteristics of Main Job
- Employed Only: Current Main Job
- Farm/Business Owners: Current Main Job
- Job Search
- Last Job of Current Non-Workers
- Social Insurance: Main job or Past Job

**Retirement & Pension**
- Month & Year of Retirement
- Industry of retirement/Occupation
- Mandatory retirement Age
- Best estimate of pre-retirement salary
- Pension (currently receiving/Expected to receive)
- Type of pension, pension amount
- Lump sum amount of pension received/expected to receive

**Experimental Module**
- Time use (in last 24 hours)
  - Time spent on various activities such as: working, walking, exercise, travelling etc.
- Expectations
  - Work limiting health problems
  - Inflationary Expectations
  - Survival Expectations
- Social Connectedness
  - Relationships with friends & family
- Vignettes
  - Evaluation of aspects of own health
    (Domains: pain & sleep)
LASI Key Domains: Social Section
Individual Questionnaire

Family, Social Network & Social Welfare

- Spouse, Children & grandchildren, Parents, Siblings, and Friends
- Living arrangements, Social Support & Instrumental care
- Intra-Household Decision-Making, Social Activities
- Social Welfare Schemes
- Psychosocial Measures
  - Elder Ill-treatment (inside/outside household)
- Life Satisfaction
- Spirituality/Religiosity
  - Opinion about the feeling and intensity of spiritualism

Welfare schemes meant for old persons
- Awareness about schemes?
- Whether availing benefits of schemes?
- Amount received during the last one year?
- For last how many years availing this benefits?
- Problem/s faced to avail benefits?
- Reasons for not availing benefits,

Concessions given by the government to elderly
- Awareness about concessions
- Utilization of concessions
  - Travel Concessions
  - Income tax benefits
  - Banking benefits
LASI - Community Survey

Rural Community

( pre-loaded from Census, 2011)

Urban Community

• Level 1
  City/town
  (pre-loaded from Census, 2011)

• Level 2
  Ward
  (pre-loaded from Census, 2011)

• Level 3
  Census Enumeration Block (Will be collected from field)

Defining Level Information

• Population by age & sex
• Total literate population
• Number of female headed households
• Number of households with latrine
• Number of households without latrine
• Number of households having no exclusive room

Infrastructure & Common Resource

• Common type of road
• Main source of Drinking water
• Drainage facility
• Public toilets
• Waste Disposal
• Main fuel for cooking, lighting

Health Situation and Facilities

• Type of health service provider
• Distance from the village/ward to the nearest facilities
• Type of health providers
• Availability of health providers
• Number of health provider/s available
• Prevalence of disease/Natural disaster

Additional Information

• Occupation by sex
• % BPL, minimum wage for casual labor
• Gram Panchayat & its function
• Health and Social Programs (state level & central level)
• Functioning of Village Health & sanitation Committee
• Unmeet needs of elderly

• Area and acres of arable land & its price
• Nearest railway station
• Organizations for elderly outside community
• Crime & security
• Prevalence of addiction
LASI Outcomes and Long term Implications

- Comprehensive national and state reports, summarizing the descriptive findings
- Internationally comparable scientific multidisciplinary data
- Enhance the understanding of the Science of healthy ageing

India and State Reports Dissemination

- Landmark National Policies
  - Health; Disease prevention and control, Disability Control
  - Social Security and Ageing Policy Framework
  - Policies for Economic Challenges posed by Ageing

National and International Scientific Value Addition

- Publicly available high quality Data for Scientific Research
- Contribute to National and Global Research Agenda
- Substantive data analysis and Scientific research in the key domains of health and ageing
LASI provides data on social, economic and health domains of older adult population of India from a large heterogeneous population of diverse background.
THANK YOU