

## CURRICULUM VITAE

### Koichiro Shiba

Research Fellow

Harvard T.H. Chan School of Public Health

Department of Epidemiology

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#### ACADEMIC APPOINTMENTS

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<b>Harvard T.H. Chan School of Public Health</b>	Boston, MA
Research Fellow	
Department of Epidemiology	June 2020 - current
Department of Social and Behavioral Sciences	
<b>Harvard University</b>	Cambridge, MA
Research Fellow	
Human Flourishing Program, Institute for Quantitative Social Science	June 2020 - current

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#### EDUCATION

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<b>Harvard University, Graduate School of Arts and Sciences</b>	Boston, MA
Ph.D. in Population Health Sciences	April 2020
<ul style="list-style-type: none"><li>Title of Dissertation: Challenges and Opportunities in Epidemiology of a Natural Disaster: Lessons From the 2011 Great East Japan Earthquake and Tsunami</li><li>Advisor: Ichiro Kawachi</li><li>Dissertation Committee: Ichiro Kawachi, Mariana Arcaya, Peter James</li></ul>	
<b>The University of Tokyo, Faculty of Medicine</b>	Tokyo, Japan
Master of Public Health	May 2016
<ul style="list-style-type: none"><li>Thesis Title: Changes in working status in later life, mental health, and social participation: A fixed-effects analysis of longitudinal data from the Japan Gerontological Evaluation Study</li><li>Advisors: Naoki Kondo and Hideki Hashimoto</li></ul>	

- Thesis title: Informal and formal social support and caregiver burden: AGES Caregiver Survey
- Advisors: Naoki Kondo and Hideki Hashimoto

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PEER-REVIEWED PUBLICATIONS

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- **Shiba K**, Torres JM, Daoud A, Inoue K, Kanamori S, Tsuji T, Kamada M, Kondo K, Kawachi I. Estimating the impact of sustained social participation on depressive symptoms in older adults. *Epidemiology*. In press.
- **Shiba K**, Kubzansky LD, Williams DR, VanderWeele TJ, Kim ES. Associations Between Purpose in Life and Mortality by SES. *American Journal of Preventive Medicine*. In Press.
- **Shiba K**, Kawahara T, Aida J, Kondo K, Kondo N, James P, Arcaya M, Kawachi I. Causal Inference in Studying the Long-term Health Effects of Disasters: Challenges and Potential Solutions. *American Journal of Epidemiology*. In Press.
- Nakagomi A, **Shiba K**, Kondo K, Kawachi I. Can Online Communication Prevent Depression Among Older People? A Longitudinal Analysis. *Journal of Applied Gerontology*. 2020 Dec 24;0733464820982147.
- Ogawa T, Yoshii T, Moriwaki M, Morishita S, Oh Y, Miyatake K, Nazarian A, **Shiba K**, Okawa A, Fushimi K, Fujiwara T. Association between Hemiarthroplasty vs Total Hip Arthroplasty and Major Surgical Complications among Patients with Femoral Neck Fracture. *Journal of Clinical Medicine*. 2020 Oct;9(10):3203.
- **Shiba K**, Yazawa A, Kino S, Kondo K, Aida J, Kawachi I. Depressive symptoms in the aftermath of major disaster: Empirical test of the social support deterioration model using natural experiment. *Wellbeing, Space and Society*. 2020 Jan 1;1:100006.
- **Shiba K**, Hanazato M, Aida J, Kondo K, Arcaya M, James P, Kawachi I. Cardiometabolic Profiles and Change in Neighborhood Food and Built Environment Among Older Adults: A Natural Experiment. *Epidemiology*. 2020 Nov;31(6):758-767.
- **Shiba K**, Aida J, Kondo K, Nakagomi A, Arcaya M, James P, et al. Mediation of the relationship between home loss and worsened cardiometabolic profiles of older disaster survivors by post-disaster relocation: A natural experiment from the Great East Japan earthquake and tsunami. *Health & Place*. 2020;66:102456.
- Kim ES, **Shiba K**, Boehm JK, Kubzansky LD. Sense of purpose in life and five health behaviors in older adults. *Preventive Medicine*. 2020 Oct 1;139:106172.
- Nakagomi A, **Shiba K**, Hanazato M, Kondo K, Kawachi I. Does community-level social capital mitigate the impact of widowhood & living alone on depressive symptoms?: A

prospective, multi-level study. *Social Science & Medicine*. 2020 Aug 1;259:113140.

- Nakagomi A, **Shiba K**, Kondo K, Kawachi I. Can social capital moderate the impact of widowhood on depressive symptoms? A fixed-effects longitudinal analysis. *Aging & Mental Health*. 2020 Jul 17:1-0.
- **Shiba K**, Kondo N. The Global Financial Crisis and Overweight among Children of Single Parents: A Nationwide 10-Year Birth Cohort Study in Japan. *International Journal of Environmental Research and Public Health*. 2019;16(6).
- **Shiba K**, Hikichi H, Aida J, Kondo K, Kawachi I. Long-Term Associations Between Disaster Experiences and Cardiometabolic Risk: A Natural Experiment From the 2011 Great East Japan Earthquake and Tsunami. *American Journal of Epidemiology*. 2019;188(6):1109-19.
- Saito T, Kondo N, **Shiba K**, Murata C, Kondo K. Income-based inequalities in caregiving time and depressive symptoms among older family caregivers under the Japanese long-term care insurance system: A cross-sectional analysis. *PLOS ONE*. 2018;13(3):e0194919.
- **Shiba K**, Kondo N, Kondo K, Kawachi I. Retirement and mental health: does social participation mitigate the association? A fixed-effects longitudinal analysis. *BMC Public Health*. 2017;17(1):526.
- **Shiba K**, Kondo N, Kondo K. Informal and Formal Social Support and Caregiver Burden: The AGES Caregiver Survey. *Journal of Epidemiology*. 2016;26(12):622-8.
- Group JGHW. Protecting human security: proposals for the G7 Ise-Shima Summit in Japan. *The Lancet*. 2016;387(10033):2155-62.
- **Shiba K**, Nishimoto M, Sugimoto M, Ishikawa Y. The Association between Meditation Practice and Job Performance: A Cross-Sectional Study. *PLOS ONE*. 2015;10(5):e0128287.

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#### PRESENTATIONS/CONFERENCES

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- **Shiba K**, Kawachi I. Challenges and Approaches for Causal Inference in Studying the Long-term Health Effects of Disaster. (Oral Presentation) The Society for Epidemiologic Research 2020 Annual Meeting (Virtual), Dec 2020.
- **Shiba K**, Kim E.S., VanderWeele T.J., Kubzansky L.D. Is the association between purpose in life and mortality modified by key social structural factors? (Oral Presentation) *American Psychosomatic Society*; Long Beach, CA, USA, March 2020.
- Kim E.S., **Shiba K**, Rimm E, Kubzansky L.D. Sense of purpose in life and health behaviors. Society of Behavioral Medicine, San Francisco, CA, USA.
- Kim E.S., **Shiba K**, Rimm E, Kubzansky L.D. Sense of purpose in life and health behaviors over time. Gerontological Society of America Annual Conference, Austin, TX, USA.
- **Shiba K**, Hanazato M, Kawachi I. Does Neighborhood Environment Causally Affect

Cardiometabolic Risks? - Natural Experiment From the 2011 Great East Japan Earthquake  
 -. (Poster Presentation) The Society for Epidemiologic Research 2019 Annual Meeting,  
 Minneapolis, MN, USA, June 2019.

- Kamada M, Hayashi H, **Shiba K**, Taguri M, Kondo N, Lee I-M, Kawachi I. Nudging baseball fans to be active: a large-scale, smartphone-based, quasi-experimental study. 7<sup>th</sup> International Society for Physical Activity and Health Congress, London, UK, Oct 2018
- **Shiba K**, Kawachi I. Long-term impact of disaster experiences on cardiometabolic risk: A natural experiment from the 2011 Great East Japan Earthquake and Tsunami. (Oral presentation) The Society for Epidemiologic Research 51<sup>st</sup> Annual Meeting, Baltimore, ML, USA, June 2018.
- Honjo K, **Shiba K**, Tani Y, Sasaki Y, Kondo K, Kondo N. The risk of depressive symptoms according to living alone and social support among Japanese older people: A fixed effects analysis of longitudinal data from the Japan Gerontological Evaluation Study. ICBM2016 2016.12.10 Melbourne, Australia
- **Shiba K**, Kondo N. Pre-adolescent overweight in single-parent households after the global economic crisis: a nationwide 10-year birth cohort study in Japan. (Poster presentation) Epidemiology Congress of the Americas 2016, Miami, FL, USA, June 2016.
- **Shiba K**, Kondo N, Kondo K, Kawachi I. Changes in working status in later life and mental health: Longitudinal findings from the Japan Gerontological Evaluation Study. (Poster presentation) Inaugural Forum on Population Health Equity, Boston, MA, USA, September 2015.
- **Shiba K**, Kondo N. Social roles in households or local communities and depression among older Japanese -the AGES longitudinal study-. (Poster presentation) The Society for Epidemiologic Research 48th Annual Meeting, Denver, CO, USA, June 2015.
- **Shiba K**, Kondo N, Kondo K. The Differential Effects of Informal and Formal Social Supports on Reducing Family Caregiver Burden –AGES Caregiver Survey-. (Oral presentation) The 25<sup>th</sup> Annual Scientific Meeting of the Japan Epidemiological Association, Aichi, Japan, January 2015.

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#### AWARD/FELLOWSHIP

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- Research Fellowship for Well-being Research, Planet Earth Foundation      2020-present
  - This fellowship covered all the expense of my post-doctoral training at the Human Flourishing Program.
- Teaching Assistant Award, Harvard T.H. Chan School of Public Health      2019

- Best Presentation, Japan Epidemiological Association 2015
- Graduate Study Scholarship, University of Tokyo 2015

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#### GRANT FUNDING

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**Title of Project:** Simulation of the effect of a continued community intervention facilitating sports participation among older adults on depression 2019

**Funding Agency:** Meiji Yasuda Life Foundation of Health and Welfare

**Funding Mechanism:** Grant for Young Health Science Investigators

**Role on Project:** Principal Investigator

**Total Amount:** \$10,000

**Title of Project:** Natural Experiment Study of Neighborhood Effects on Cardiometabolic Health of Older Adults: Insights from the 2011 Great East Japan Earthquake 2019

**Funding Agency:** Harvard University (Institute for Quantitative Social Science)

**Funding Mechanism:** Research Grants for Dissertation Research

**Role on Project:** Principal Investigator

**Total Amount:** \$3,000

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#### TEACHING EXPERIENCE

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**Epidemiologic Methods III: Models for Causal Inference (EPI289)** 2019 & 2020

Department of Epidemiology, Harvard T.H. Chan School of Public Health

- Course Contents: Intermediate course on epidemiologic methods for causal inference from observational data. The methods covered include stratification, regression model, propensity score, g-formula, inverse probability weighting and marginal structural model, g-estimation and structural nested mean model, and instrumental variable estimation.
- Role: Teaching Fellow (Grading, weekly lab sessions, and office hours)
- With: Miguel Hernan, DrPH

**Measurement Error and Misclassification for Epidemiologists (EPI515)** 2019

Department of Epidemiology, Harvard T.H. Chan School of Public Health

- Course Contents: Overview of the implications of and methods to deal with measurement error and misclassification in epidemiologic studies. Theories and assumptions for the valid use of the correction methods were discussed.
- Role: Teaching Fellow (Grading and weekly office hours)
- With: Molin Wang, Ph.D.

**Society and Health (SBS201)**

2017 &amp; 2018 (Lead Teaching Fellow)

Department of Social and Behavioral Sciences, Harvard T.H. Chan School of Public Health

- Course Contents: Introductory course on social epidemiology. Reviewed key evidence of social determinants of health and their implication for population health and health disparities.
- Role: Teaching Fellow (Grading and weekly lab sessions)
- With: Ichiro Kawachi, Ph.D.

**Principles of Social and Behavioral Research (SBS281)**

2018

Department of Social and Behavioral Sciences, Harvard T.H. Chan School of Public Health

- Course Contents: Introductory course on methods for social science research in public health. Topics covered include measurement, study design, survey research methods, questionnaire development, sampling, and data collection.
- Role: Teaching Fellow (Grading and weekly lab sessions)
- With: Laura D. Kubzansky, Ph.D.

**Advanced Epidemiologic Methods (EPI207)**

2018

Department of Epidemiology, Harvard T.H. Chan School of Public Health

- Course Contents: Advanced course on epidemiologic methods for causal inference to estimate causal effects of time-varying treatment. Topics covered include Directed Acyclic Graphs and Single World Intervention Graphs, g-formula, inverse probability weighting, dynamic regimes, structural nested models, instrumental variable estimation, and doubly robust methods.
- Role: Teaching Fellow (Grading and office hours)
- With: James Robins, M.D.

**Explaining Health Behavior: Insights from Behavioral Economics (SBS503)** 2018

Department of Social and Behavioral Sciences, Harvard T.H. Chan School of Public Health

- Course Contents: Review of the application of theories and constructs from behavioral sciences (particularly behavioral economics and social psychology) to the field of health behavior.
- Role: Teaching Fellow (Grading)
- With: Ichiro Kawachi, Ph.D.

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## OTHER RESEARCH EXPERIENCES

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### **Harvard University**

#### *Graduate Researcher*

##### Positive psychology and healthy aging

October 2018 - May 2020

- Investigated how positive psychological factors (e.g., optimism and purpose in life) are linked to health behaviors and biomarkers of physical health later in life.
- Performed statistical analyses of a nationally representative cohort study of the U.S. population (Health and Retirement Study) and prepared multiple manuscripts for peer-reviewed journals.
- Principal Investigator: Eric S. Kim, Ph.D.

##### Natural disaster and physical health of survivors

August 2017 - May 2020

- Investigated the long-term associations between traumatic experiences of natural disaster (i.e., the 2011 Great East Japan Earthquake and Tsunami) and cardiometabolic health of survivors.
- Performed statistical analyses of large cohort data and prepared a manuscript for a peer-reviewed journal.
- Principal Investigator: Ichiro Kawachi, Ph.D.

#### *Visiting Graduate Student*

May 2015 - July 2015

- Masters' thesis project completion.
- Conducted study design, data analysis, interpretation of results, and manuscript writing within four months.
- Advisor: Ichiro Kawachi, Ph.D.

### **University of Tokyo**

Tokyo, Japan

#### *Graduate Researcher*

##### Study of childhood obesity after the global economic crisis

August 2015 – August 2016

- Assisted in a study that revealed the increased risk of childhood overweight; particularly, among children from single-parent households after the global economic crisis in 2008.
- Implemented a panel data analysis of nationwide birth-cohorts and drafted a manuscript.
- Principal Investigator: Naoki Kondo, Ph.D.

##### Health survey project in the City of Rikuzentakata

March 2014 – March 2015

- An epidemiological survey that targeted residents living in temporary housing in areas affected by the disaster.
- Designed questionnaires for local citizens based on qualitative needs interviews.
- Wrote an official report and conducted an oral presentation to the local government based on the study's results, including the high prevalence of ill-health and risk factors among residents in temporary housing.
- Principal Investigator: Naoki Kondo

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#### OTHER WORKING EXPERIENCES

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##### **Cancer Scanner / Campus for H**

Tokyo, Japan

*Data Analyst*

May 2014 – August 2016

- Worked with central and municipal governments / other national research centers to plan/execute large scale community-based public health interventions via methods such as increases in cancer screening rates.
- Conducted a thorough review of over 200 scholarly articles from diverse disciplines to generate a research hypothesis
- Led a research project that investigated the association between meditation practice and subjective job performance, in addition to being the first author of the resulting article.

##### **Health and Global Policy Institute**

Tokyo, Japan

*Intern*

January 2013 – April 2015

- Worked with multiple stakeholders involved in forming health policies, including central/municipal governments, private companies, mass media, clinicians to plan/execute research and events towards better health policies.
- Engaged in the literature review and data analysis parts of the research.

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#### PEER REVIEW ACTIVITIES

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##### **Ad Hoc Referee**

Alzheimer's & Dementia, American Journal of Epidemiology, BMC Nephrology, BMC Public Health, BMC Psychiatry, BMJ Open, European Journal of Public Health, Health and Place, Journal of the American Geriatrics Society, Journal of Epidemiology, Journal of Occupational Health, Journal of Public Health, PLOS ONE, Population, Space and Place, Psychoneuroendocrinology, Social Policy and Society, Social Science and Medicine, Social Science and Medicine – Population Health