

Koichiro Shiba

Curriculum Vitae

Harvard T.H. Chan School of Public Health

Department of Epidemiology

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ACADEMIC APPOINTMENTS

Harvard T.H. Chan School of Public Health

Boston, MA

Research Fellow

Department of Epidemiology

June 2020 - current

Department of Social and Behavioral Sciences

Harvard University

Cambridge, MA

Research Fellow

Human Flourishing Program, Institute for Quantitative Social Science

June 2020 - current

EDUCATION

Harvard University, Graduate School of Arts and Sciences

Boston, MA

PhD in Population Health Sciences

April 2020

- Title of Dissertation: Challenges and Opportunities in Epidemiology of a Natural Disaster: Lessons From the 2011 Great East Japan Earthquake and Tsunami
- Advisor: Ichiro Kawachi
- Dissertation Committee: Ichiro Kawachi, Mariana Arcaya, Peter James

The University of Tokyo, Faculty of Medicine

Tokyo, Japan

Master of Public Health

May 2016

- 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
- Advisors: Naoki Kondo and Hideki Hashimoto

B.S. in Health Sciences

May 2014

- Thesis title: Informal and formal social support and caregiver burden: AGES Caregiver Survey

- Advisors: Naoki Kondo and Hideki Hashimoto

PUBLICATIONS

PEER-REVIEWED JOURNAL ARTICLES

- **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.

PRESENTATIONS/CONFERENCES

- **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. 7th 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 51st 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 25th Annual Scientific Meeting of the Japan Epidemiological Association, Aichi, Japan, January 2015.

AWARD/FELLOWSHIP

- 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
 - Introduction to Epidemiology Slideshow Contest
- Graduate Study Scholarship, University of Tokyo 2015

- Four months visit to Harvard T.H. Chan School of Public Health as a visiting graduate student

GRANT FUNDING

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 (\$10,000)

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

RESEARCH EXPERIENCES

Harvard University

Graduate Researcher

Positive psychology and healthy aging October 2018 - May 2020

- Investigated how positivity psychological factors (e.g. optimism and purpose in life) is linked to health behaviors and biomarkers of physical health later in life.
- Performed statistical analyses of a national representative cohort study of US population (Health and Retirement Study) and prepared multiple manuscripts for peer-reviewed journals.

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.

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

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.

Health survey project in the City of Rikuzentakata

March 2014 – March 2015

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

TEACHING EXPERIENCES

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 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 & 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 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 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 effect 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.

OTHER EXPERIENCES

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.

Tokyu Sports Oasis

Tokyo, Japan

Personal Trainer

January 2013 – March 2015

- Promoted habits directed towards healthy dietary and physical activity via counseling local residents and conducting educational programs.

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.

KNOWLEDGE/SKILLS

- Statistical software: SAS, STATA, R, Python, ArcGIS
- Statistical knowledge: causal inference from observational data, mediation analyses, longitudinal data analyses, multilevel modeling, survival data analyses, missing data handling (multiple imputation), bootstrapping, panel data analyses, geospatial analyses, data visualization.

PEER REVIEW ACTIVITIES

- American Journal of Epidemiology
- BMC Nephrology
- BMC Public Health
- BMJ Open

- European Journal of Public Health
- Journal of the American Geriatrics Society
- Journal of Occupational Health
- Journal of Public Health
- PLOS ONE
- Psychoneuroendocrinology
- Social Policy and Society
- Social Science and Medicine
- Social Science and Medicine – Population Health