

Advancing Health Equity in Aging Research through a Causal Inference Framework

L. Paloma Rojas-Saunero MD, PhD

Postdoctoral scholar

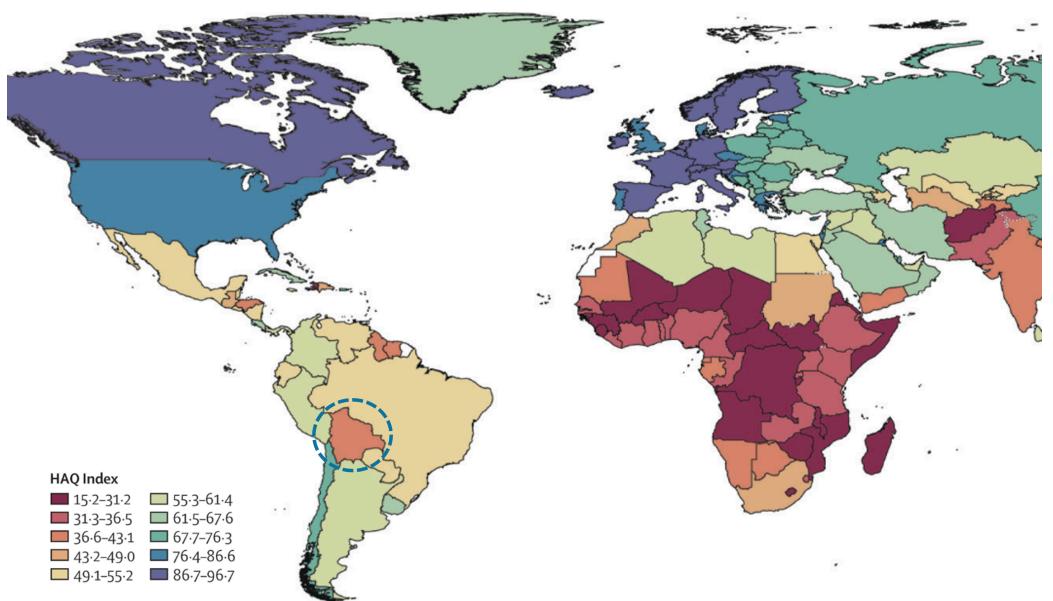
Department of Epidemiology, UCLA



Fielding
School of Public Health

Background

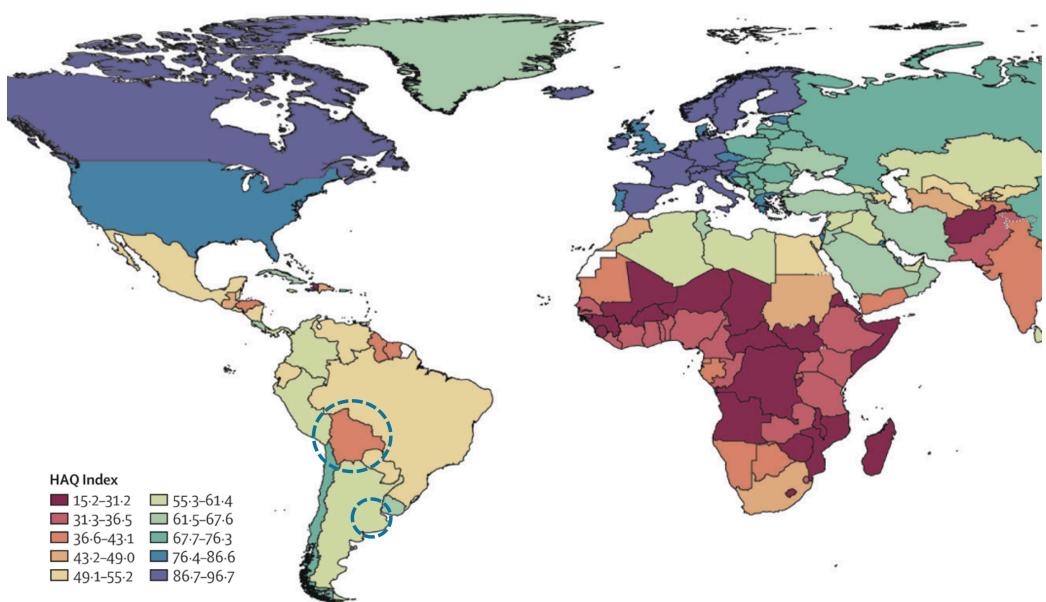
- **Bolivia**
 - Medicine
 - Undergraduate Research Assistant



Healthcare Access and Quality Index, Lancet Global Health, 2022

Background

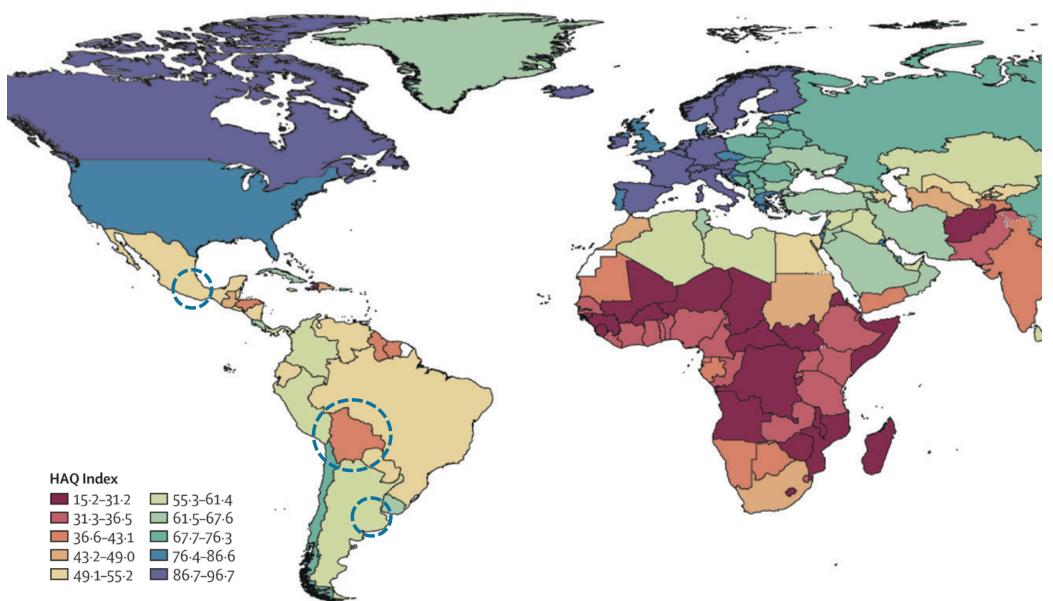
- **Bolivia**
 - Medicine
 - Undergraduate Research Assistant
- **Argentina**
 - Master in Clinical Research/Statistics for Health Sciences
 - Researcher in Clinical Epidemiology



Healthcare Access and Quality Index, Lancet Global Health, 2022

Background

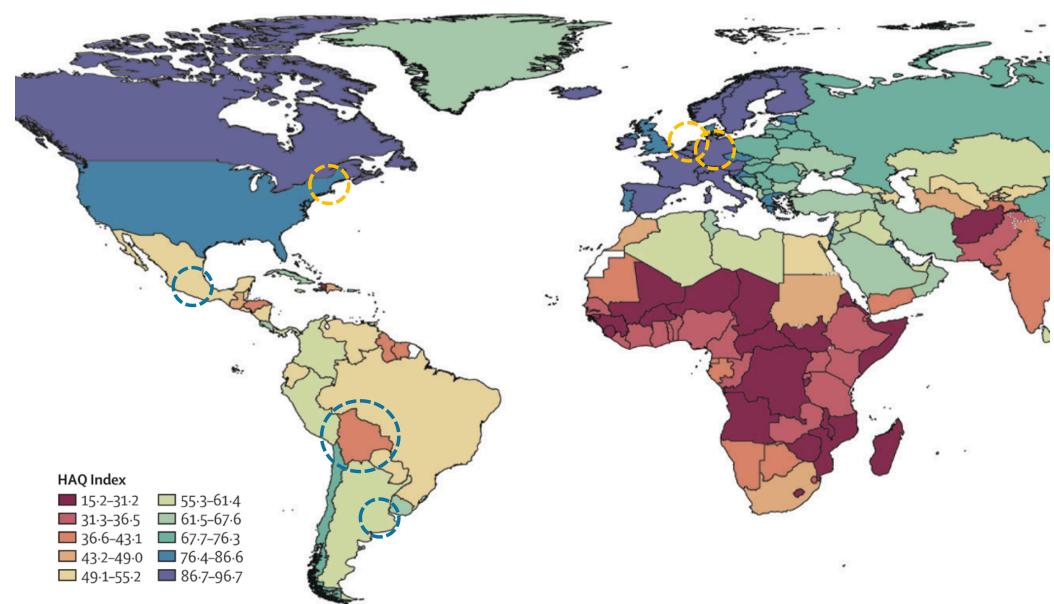
- **Bolivia**
 - Medicine
 - Undergraduate Research Assistant
- **Argentina**
 - Master in Clinical Research/Statistics for Health Sciences
 - Researcher in Clinical Epidemiology
- **Mexico**
 - Research Assistant Environmental Epi



Healthcare Access and Quality Index, Lancet Global Health, 2022

Background

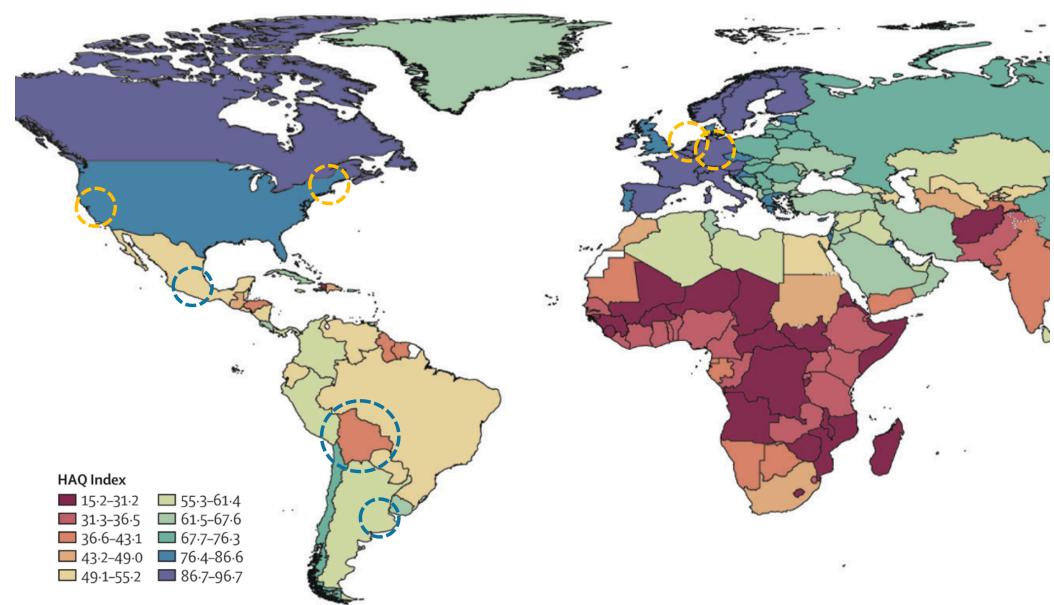
- **Bolivia**
 - Medicine
 - Undergraduate Research Assistant
- **Argentina**
 - Master in Clinical Research/Statistics for Health Sciences
 - Researcher in Clinical Epidemiology
- **Mexico**
 - Research Assistant Environmental Epi
- **Netherlands**
 - PhD. in Epidemiology, Erasmus MC
- **United States**
 - Visiting Scholar CAUSALab
- **Germany**
 - Visiting Scholar, Leibniz Inst



Healthcare Access and Quality Index, Lancet Global Health, 2022

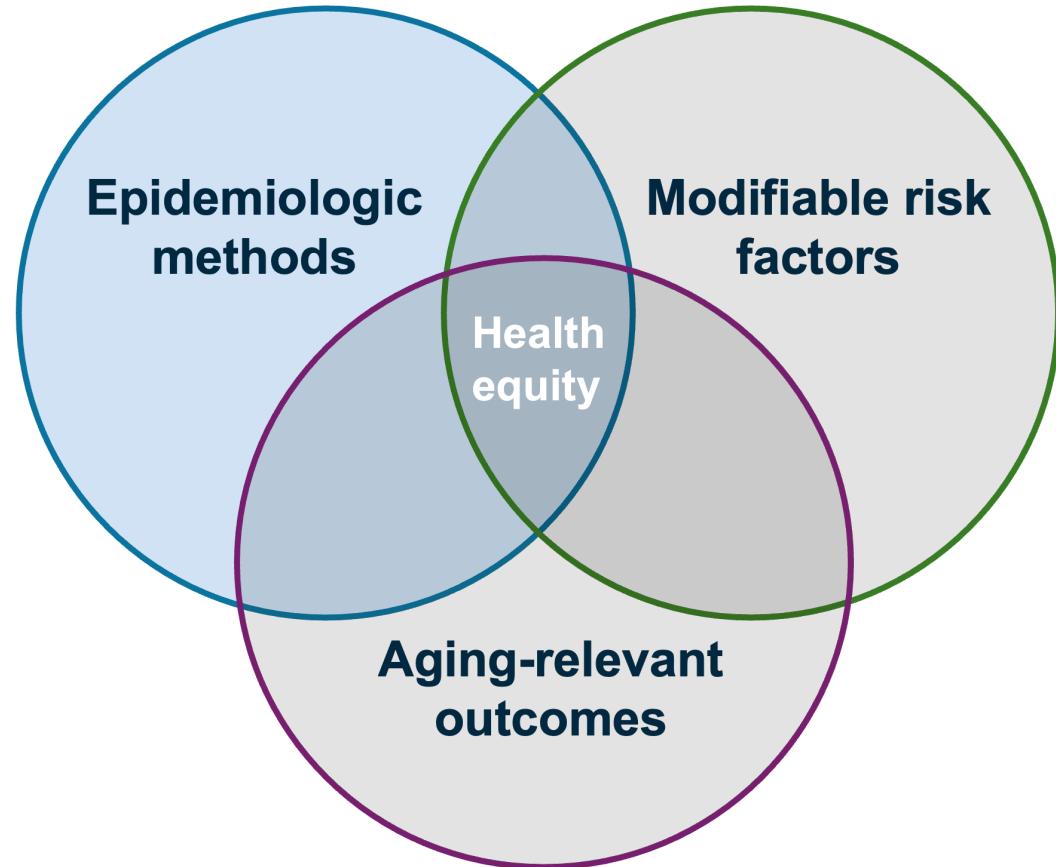
Background

- **Bolivia**
 - Medicine
 - Undergraduate Research Assistant
- **Argentina**
 - Master in Clinical Research/Statistics for Health Sciences
 - Researcher in Clinical Epidemiology
- **Mexico**
 - Research Assistant Environmental Epi
- **Netherlands**
 - PhD. in Epidemiology, Erasmus MC
- **United States**
 - Visiting Scholar CAUSALab
- **Germany**
 - Visiting Scholar, Leibniz Inst
- **United States**
 - Postdoctoral Scholar, FSPH, UCLA

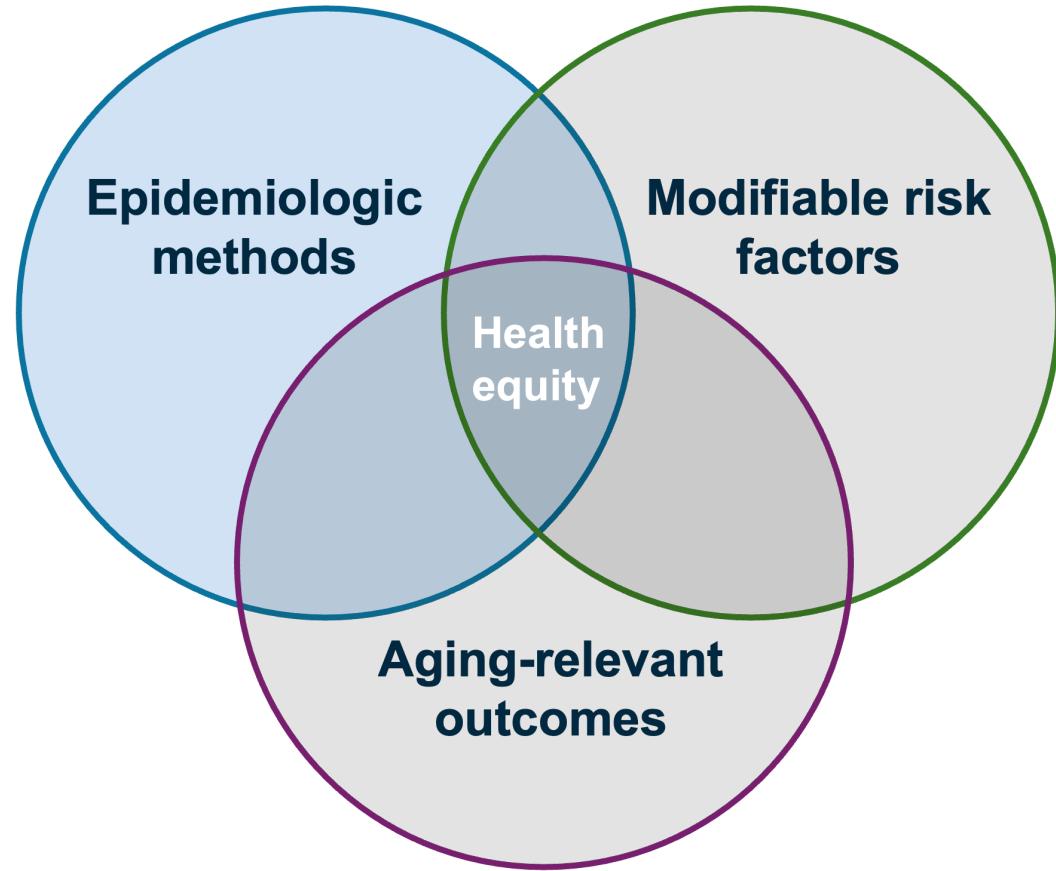


Healthcare Access and Quality Index, Lancet Global Health, 2022

Research Focus



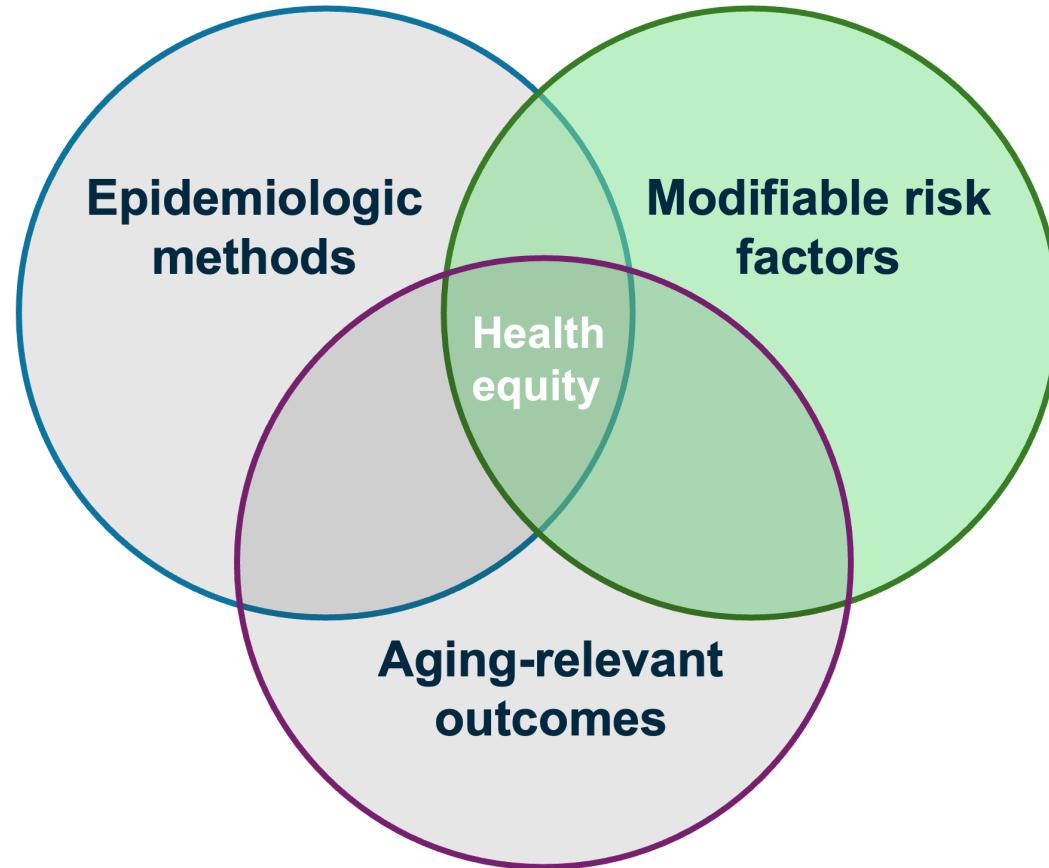
Research Focus



Methods:

- **Causal inference:**
 - Estimands for competing/truncation events
 - Target trial emulation
 - Application of G-methods
- **Intersectionality:**
 - Effect heterogeneity
 - MAIHDA framework

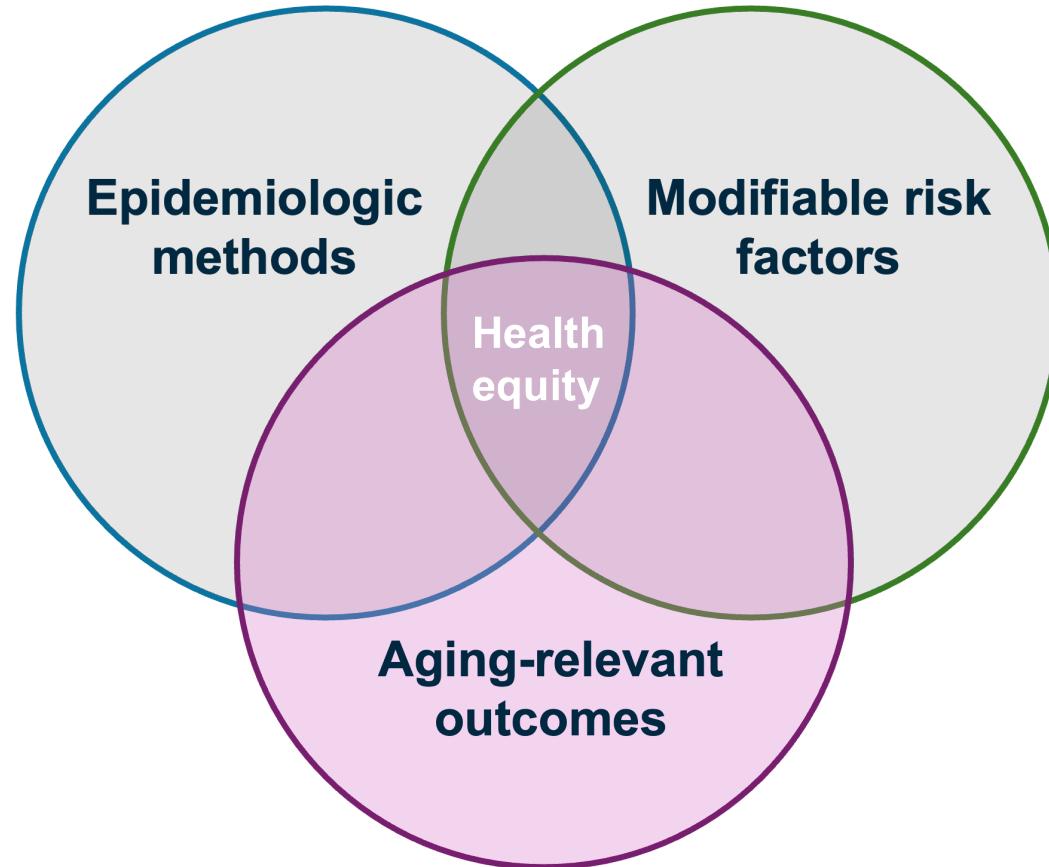
Research Focus



Modifiable Risk Factors:

- **Clinical:** statins, blood pressure interventions
- **Social:** social isolation, education, SES, food insecurity, household crowding
- **Structural:** residential segregation, rural-urban disparities

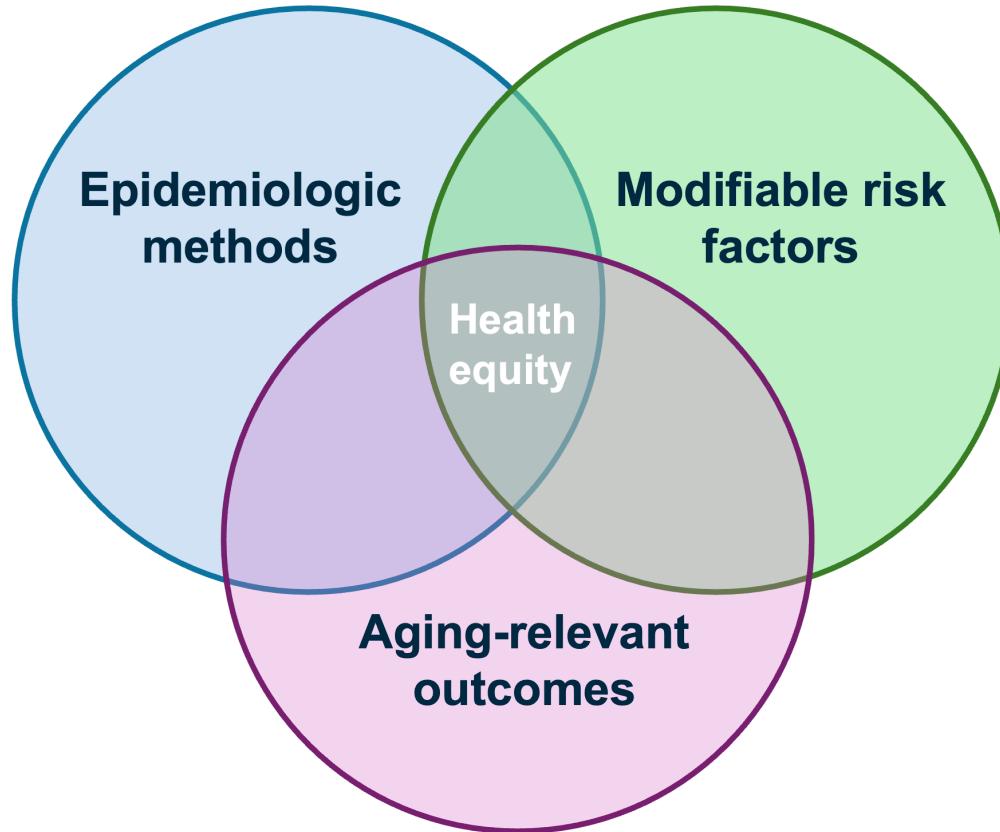
Research Focus



Outcomes:

- **Clinical:** stroke, dementia, death
- **Cognition:** memory decline
- **Functional:** functional impairment and disability

Research Focus



Research Outline

Estimands for competing and truncation events on aging-related outcomes

- Smoking and dementia risk
- Stroke and dementia risk
- Social isolation and functional impairment trajectories

Research Outline

Estimands for competing and truncation events on aging-related outcomes

- Smoking and dementia risk
- Stroke and dementia risk
- Social isolation and functional impairment trajectories

Target trial framework to evaluate modifiable risk factors of dementia

- Intensive vs. standard management of systolic blood pressure across race/ethnic subgroups

Research Outline

Estimands for competing and truncation events on aging-related outcomes

- Smoking and dementia risk
- Stroke and dementia risk
- Social isolation and functional impairment trajectories

Target trial framework to evaluate modifiable risk factors of dementia

- Intensive vs. standard management of systolic blood pressure across race/ethnic subgroups

Future work

- Occupational determinants of cognitive and brain health in Latinx community

Estimands for Competing and Truncation Events

Why smoking may prevent dementia, according to researchers

NICOTINE has been found to protect the brain as it ages so smoking could help prevent dementia, researchers claimed.

By JOHN FITZPATRICK

PUBLISHED: 16:25, Sun, Oct 2, 2016 | UPDATED: 18:09, Sun, Oct 2, 2016

THE LANCET

Diabetes & Endocrinology

This journal Journals Publish Clinical Global health Multimedia Events About

CORRESPONDENCE · Volume 3, Issue 7, P499, July 2015

Does midlife obesity really lower dementia risk?

Helios Pareja-Galeano ^{a,b}✉ · Fabian Sanchis-Gomar ^b · Rafael Alis ^c · María Morán ^{b,d} · Alejandro Lucia ^{a,b}

Inverse Association Between Cancer and Dementia A Population-based Registry Study in Taiwan

Lin, Hsiu-Li MD^{*†}; Lin, Hsiu-Chen MD, PhD^{‡§}; Tseng, Yuan-Fu MD^{*}; Chen, Shih-Chang PhD[¶]; Hsu, Chien-Yeh PhD^{†||}

Author Information

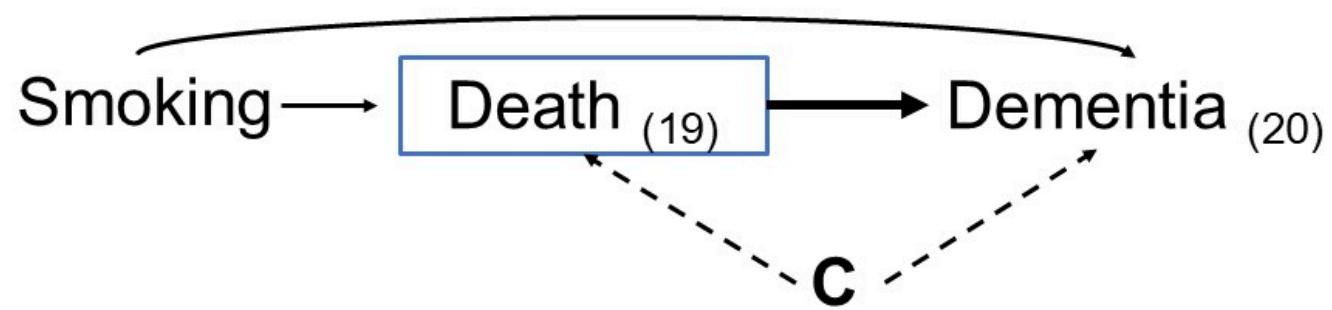
Alzheimer Disease & Associated Disorders 30(2):p 118-122, April–June 2016. | DOI: 10.1097/WAD.0000000000000116

The Association Between Blood Pressure and Incident Alzheimer Disease A Systematic Review and Meta-analysis

Power, Melinda C.^{a,b}; Weuve, Jennifer^{b,c}; Gagne, Joshua J.^{a,d}; McQueen, Matthew B.^e; Viswanathan, Anand^f; Blacker, Deborah^{a,g}

be a consistent pattern across studies. After stratifying on age at BP assessment, we found a suggestion of an inverse association between late-life hypertension and Alzheimer disease and a suggestion of an adverse association between midlife diastolic hypertension and Alzheimer disease.

Quitting smoking and 20-year dementia risk



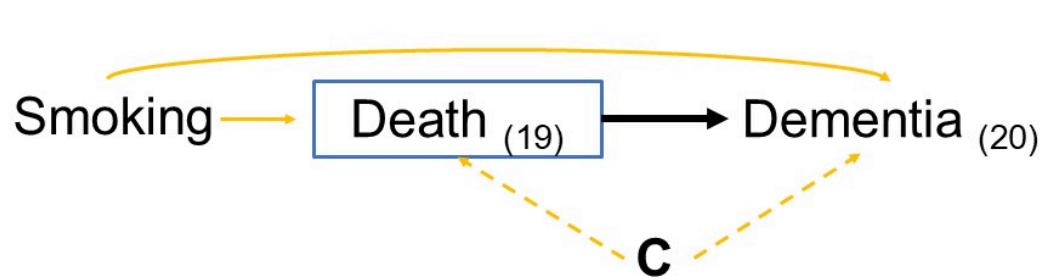
C: Shared risk factors

Rojas-Saunero et al. *American Journal of Epidemiology*. 2023

Questions before methods

Total effect

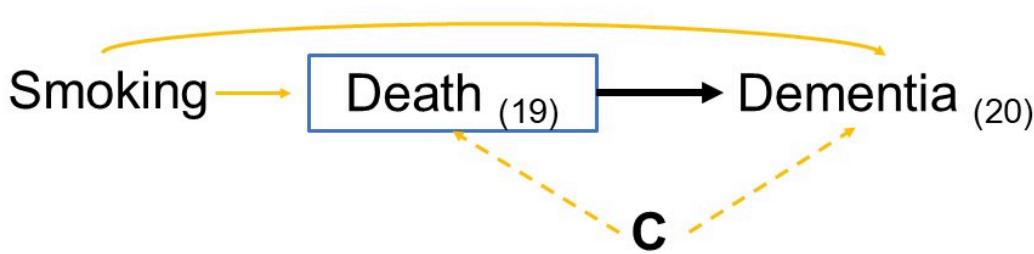
What is the risk of dementia at 20 years of follow-up had all individuals stopped smoking, compared to had all individuals continued smoking?



Questions before methods

Total effect

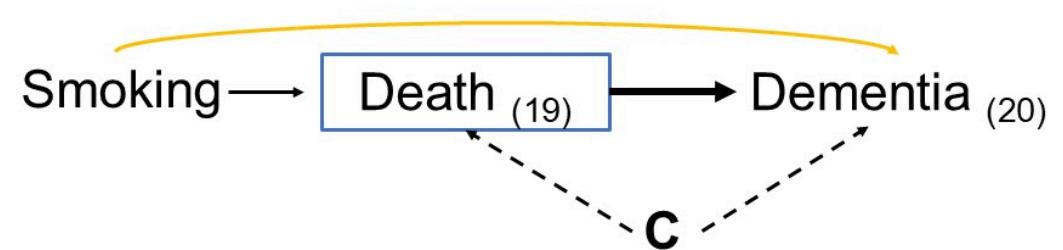
What is the risk of dementia at 20 years of follow-up had all individuals stopped smoking, compared to had all individuals continued smoking?



C: Shared risk factors

Controlled direct effect

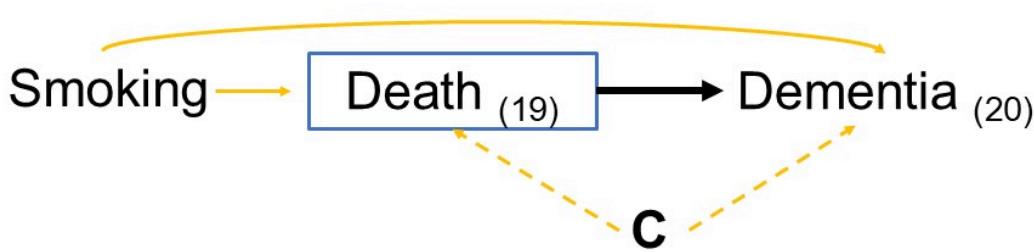
What is the risk of dementia at 20 years of follow-up had all individuals stopped smoking **and not died** during the study period, compared to had all individuals continued smoking **and not died** ?



Questions before methods

Total effect

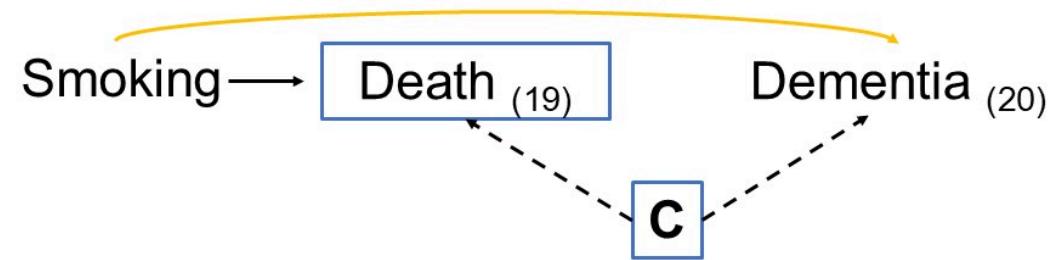
What is the risk of dementia at 20 years of follow-up had all individuals stopped smoking, compared to had all individuals continued smoking?



C: Shared risk factors

Controlled direct effect

What is the risk of dementia at 20 years of follow-up had all individuals stopped smoking **and not died** during the study period, compared to had all individuals continued smoking **and not died** ?



Identifiability assumptions for death

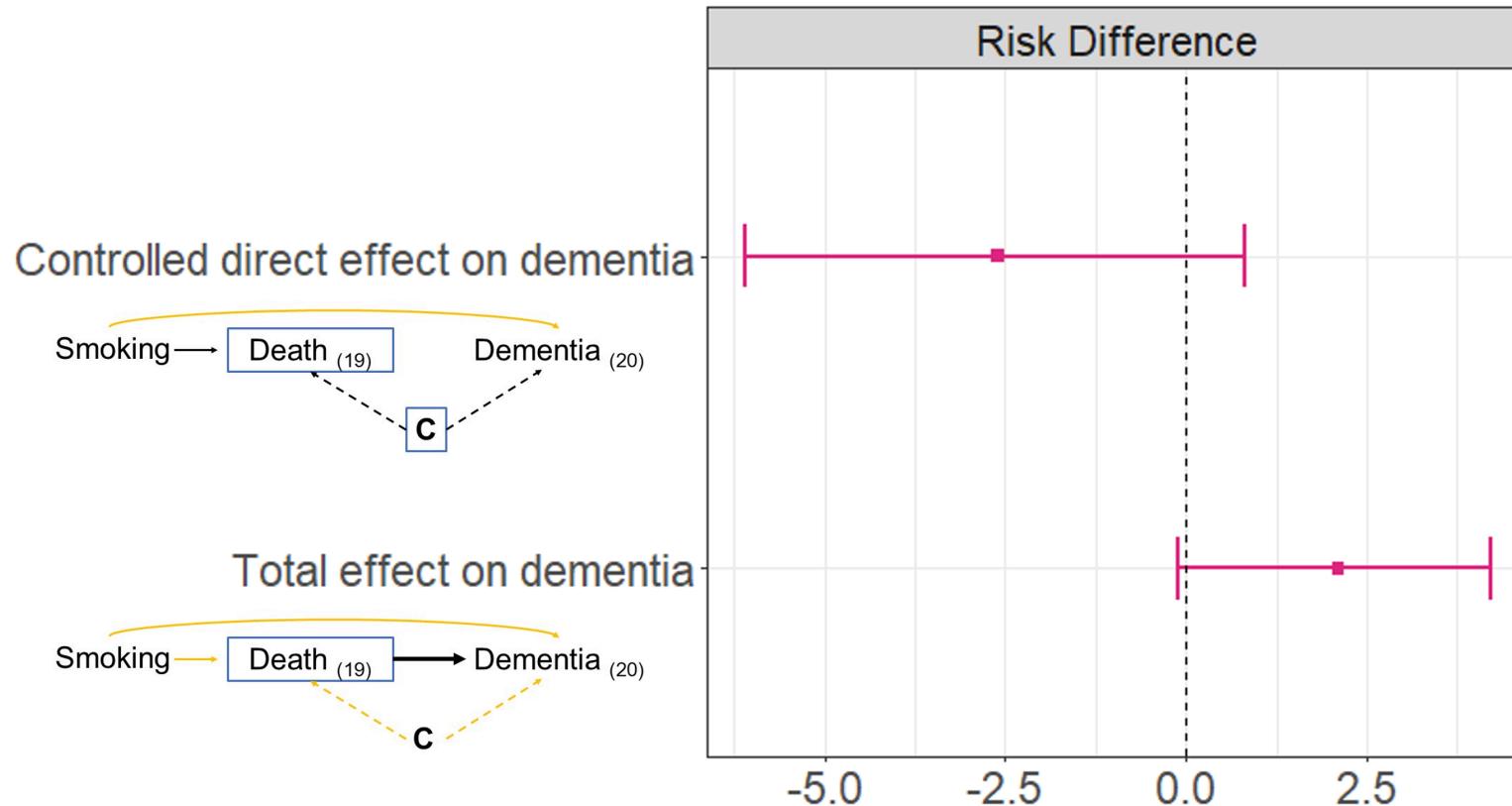
Assumption	Total Effect	Controlled direct effect
Exchangeability	Not needed	Death is independent of future outcomes had everyone followed $A = a$ and death was eliminated, conditional on covariates
Positivity	Not needed	At every follow-up time, there are individuals with any possibly observed level $A = a$ and covariate history who remain alive and free of dementia diagnosis.
Consistency	Not needed	An intervention that “eliminates death” is well-defined.

Rojas-Saunero et al. *American Journal of Epidemiology*. 2023

Estimators

Feature	Total Effect	Controlled Direct Effect
Estimator	Aalen–Johansen	Kaplan–Meier
Death handling	Competing event	Censoring event
Hazards needed	Dementia + death	Dementia only
Risks	Risk of dementia = conditional risk of dementia in year t × cumulative probability of surviving dementia-free and death-free up to t-1	Risk of dementia = conditional risk of dementia in year t × cumulative probability of surviving dementia-free up to t-1

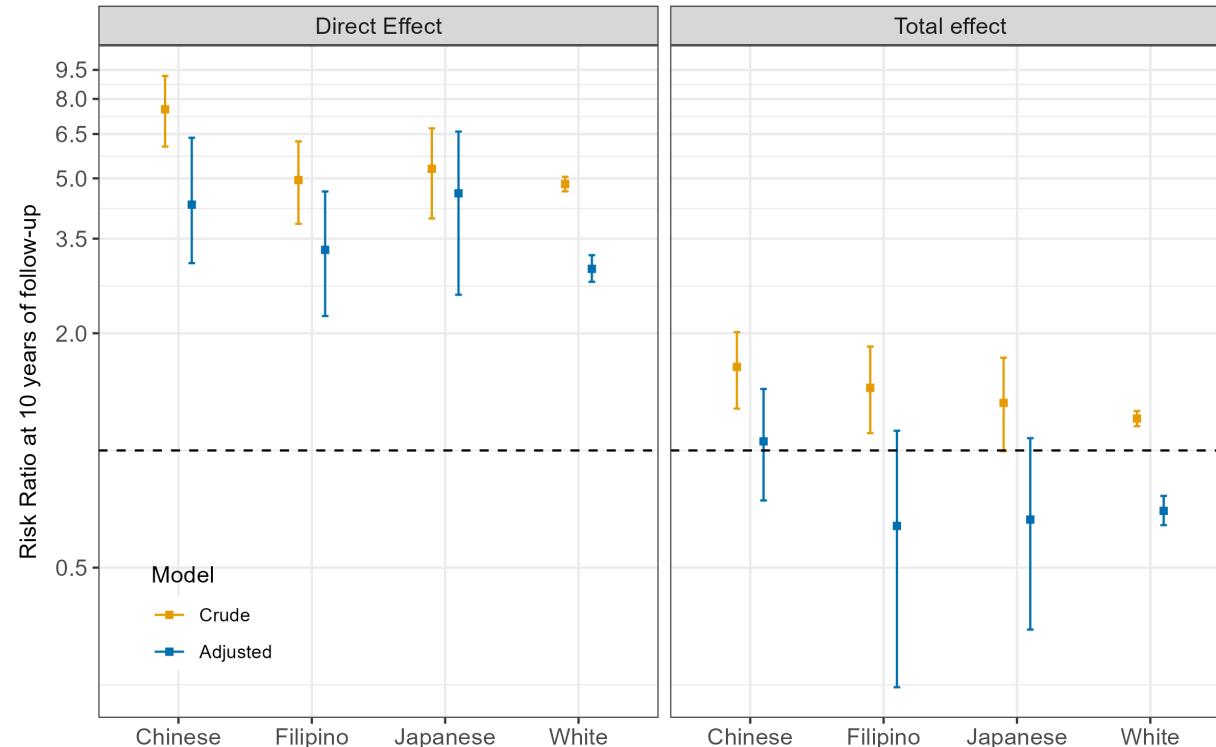
Quitting smoking on dementia risk at 20 years



Rojas-Saunero et al. *American Journal of Epidemiology*. 2023

ROTTERDAM
STUDY

Incident stroke on dementia risk in Asian American and White population



Rojas-Saunero et al. *Neurology*. 2025



KAI SER PERMANENTE®

Social isolation and functional impairment trajectories



- The evidence between social isolation and functional impairment is mixed
- Most studies have an analytic sample of only survivors
- Drop out and death act as truncation events, meaning that once they happen their future outcome is undefined

Methods

Social Isolation: Binarized 5-item Social Isolation Index

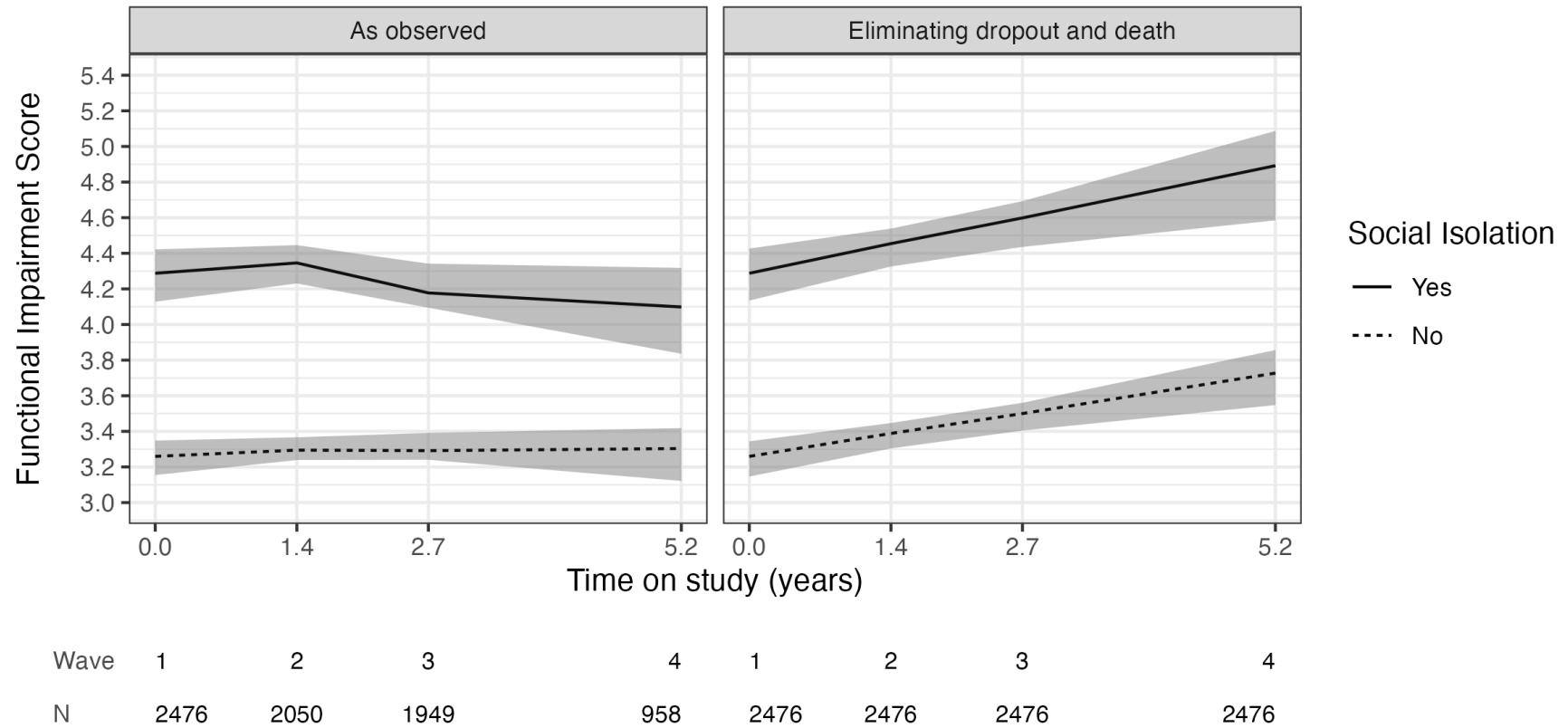
Functional Impairment: Functional impairment (ADLs + IADLs + mobility, 0-36) at 4 waves over 5 years

Descriptive estimands:

As observed: among participants still alive and observed

Under elimination of dropout/death: predicts trajectories for all participants at all waves

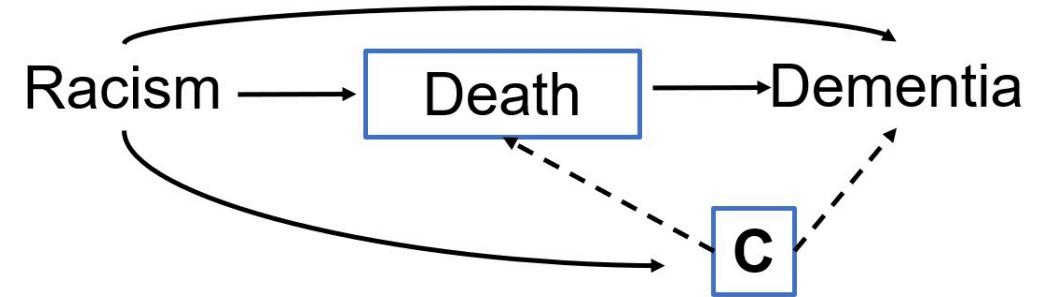
Social isolation and trajectories of functional impairment



Currently under R&R at *J. Gerontol. A Biol. Sci. Med. Sci.*

Competing/truncation events in health equity research

- Differential mortality can bias descriptive, predictive, and causal comparisons across groups
- Accounting for death is critical when studying disparities in aging outcomes



Discussion

- Competing events can be framed in different ways depending on the research question

Discussion

- Competing events can be framed in different ways depending on the research question
- All approaches have trade-offs—there is no "one size fits all"

Discussion

- Competing events can be framed in different ways depending on the research question
- All approaches have trade-offs—there is no "one size fits all"
- Translating novel estimands into applied research requires acknowledging their importance first

Discussion

- Competing events can be framed in different ways depending on the research question
- All approaches have trade-offs—there is no "one size fits all"
- Translating novel estimands into applied research requires acknowledging their importance first
- Progress needs collaboration across statisticians, epidemiologists, applied researchers, and stakeholders

Related Work

- **Rojas-Saunero LP**, Wu Y, Gee GC, Brookmeyer R, Posis AIB, Whitmer RA, Gilsanz P, Mayeda ER. Sex/gender differences in the risk of dementia for Asian American ethnic subgroups and non-Latino White older adults in California. *npj Dementia*. 2025.
- **Rojas-Saunero LP**, van der Willik KD, Schagen SB, Ikram MA, Swanson SA. Towards a clearer causal question underlying the association between cancer and dementia. *Epidemiology*. 2024.
- **Rojas-Saunero LP**, Patino CM, Ferreira JC. Intercurrent events in clinical research: the norm, not the exception. *Jornal Brasileiro de Pneumologia*. 2022.
- Young J, Stensrud M, **Rojas-Saunero LP**. Society of Epidemiologic Research Pre-Conference Workshop: "**Causal inference with competing events**". 2022-2023.

Direct, total and separable effects

palolili23.github.io/SER_competing_events_workshop/R/gform.html

Direct, total and separable effects, using G-formula

Conditional pooled logistic models

- Glimpse of “treated” data:

[Hide](#)

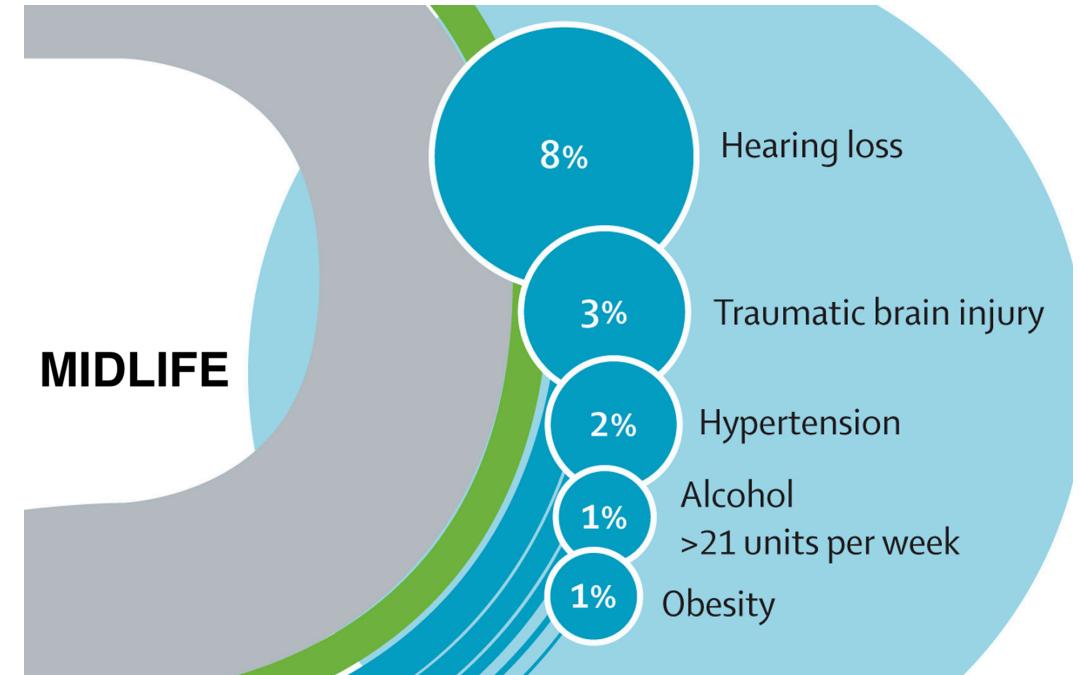
```
treated %>%
  filter(patno %in% c(489)) %>% select(
    patno, dtime, rx, hazardP, hazardO, s
  ) %>% slice(1:5, 55:59) %>% knitr::kable()
```

	patno	dtime	rx	hazardP	hazardO	s
8478	489	0	1	0.0231061	0	0.970
8478.1	489	1	1	0.0234620	0	0.970
8478.2	489	2	1	0.0238175	0	0.970
8478.3	489	3	1	0.0241730	0	0.970
8478.4	489	4	1	0.0245289	0	0.970

Target trial emulation to study modifiable risk factors of dementia

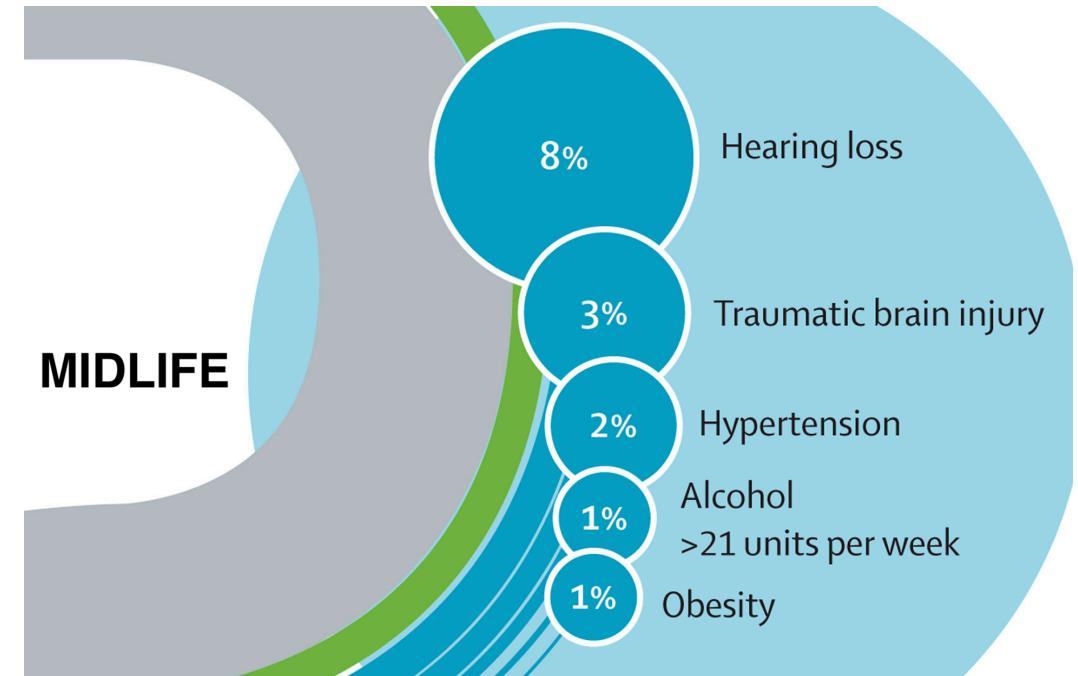
Motivation

- There is a need to identify modifiable risk factors across the life course, and we rely on observational data



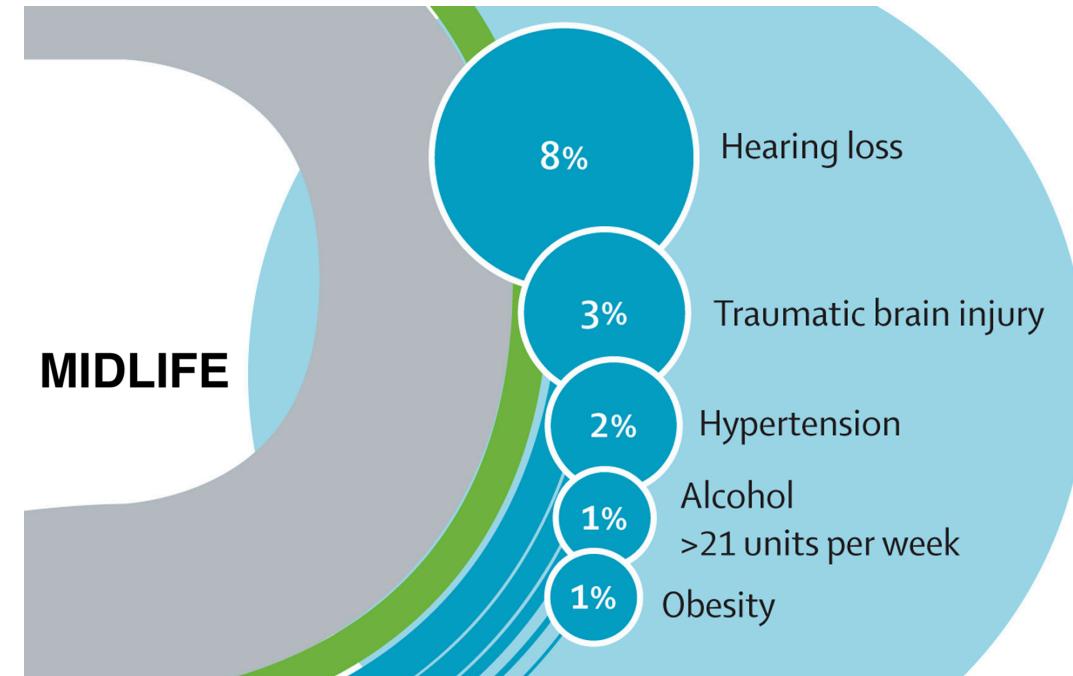
Motivation

- There is a need to identify modifiable risk factors across the life course, and we rely on observational data
- Studies focus on single time-point exposure assessment rather than the longitudinal effects



Motivation

- There is a need to identify modifiable risk factors across the life course, and we rely on observational data
- Studies focus on single time-point exposure assessment rather than the longitudinal effects
- We need causal methods to guide prevention strategies



Hypertension and Blood Pressure

- SPRINT-MIND: intensive (<120 mmHg) vs. standard (<140 mmHg) control of systolic blood pressure on dementia outcomes

Hypertension and Blood Pressure

- SPRINT-MIND: intensive (<120 mmHg) vs. standard (<140 mmHg) control of systolic blood pressure on dementia outcomes
- Highly selected population → limited generalizability

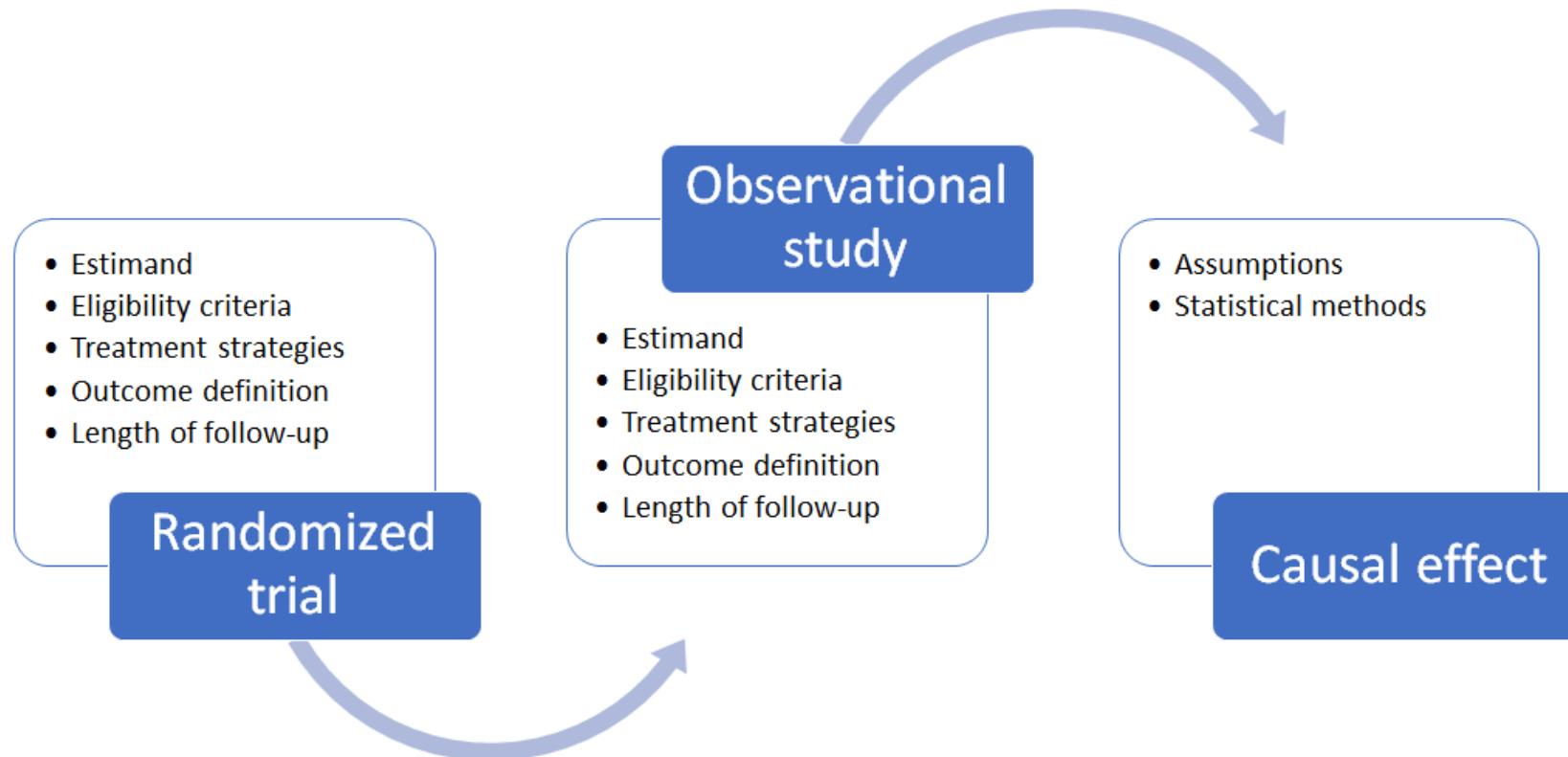
Hypertension and Blood Pressure

- SPRINT-MIND: intensive (<120 mmHg) vs. standard (<140 mmHg) control of systolic blood pressure on dementia outcomes
- Highly selected population → limited generalizability
- Hypertension burden is higher in Black and Latinx adults

Hypertension and Blood Pressure

- SPRINT-MIND: intensive (<120 mmHg) vs. standard (<140 mmHg) control of systolic blood pressure on dementia outcomes
- Highly selected population → limited generalizability
- Hypertension burden is higher in Black and Latinx adults
- We need evidence on whether intensive blood pressure control could reduce disparities

Target Trial Framework



Section	Target trial protocol	Emulation using observational data
Eligibility criteria	Chinese, Black, Latinx, White < 85 years old Free of cardiovascular disease No dementia diagnosis at baseline	Same

Section	Target trial protocol	Emulation using observational data
Eligibility criteria	Chinese, Black, Latinx, White ‐ < 85 years old ‐ Free of cardiovascular disease ‐ No dementia diagnosis at baseline	Same
Treatment strategies	0. Natural course (comparison arm) 1. Keep SBP < 120 mmHg 2. Keep SBP < 140 mmHg	Same strategies during the first 10 years of follow-up

Section	Target trial protocol	Emulation using observational data
Eligibility criteria	Chinese, Black, Latinx, White ‐ < 85 years old ‐ Free of cardiovascular disease ‐ No dementia diagnosis at baseline	Same
Treatment strategies	0. Natural course (comparison arm) 1. Keep SBP < 120 mmHg 2. Keep SBP < 140 mmHg	Same strategies during the first 10 years of follow-up
Follow-up	From year of first visit until 19 years of follow-up, or year of dementia or death, whichever happened first	Same

Section	Target trial protocol	Emulation using observational data
Eligibility criteria	Chinese, Black, Latinx, White ‐ < 85 years old ‐ Free of cardiovascular disease ‐ No dementia diagnosis at baseline	Same
Treatment strategies	0. Natural course (comparison arm) 1. Keep SBP < 120 mmHg 2. Keep SBP < 140 mmHg	Same strategies during the first 10 years of follow-up
Follow-up	From year of first visit until 19 years of follow-up, or year of dementia or death, whichever happened first	Same
Assignment	Participants randomized at baseline who might be aware of their treatment group	Randomization emulated by adjusting for baseline covariates and adherence by adjusting for time-varying covariates

Section	Target trial protocol	Emulation using observational data
Eligibility criteria	Chinese, Black, Latinx, White ‐ < 85 years old ‐ Free of cardiovascular disease ‐ No dementia diagnosis at baseline	Same
Treatment strategies	0. Natural course (comparison arm) 1. Keep SBP < 120 mmHg 2. Keep SBP < 140 mmHg	Same strategies during the first 10 years of follow-up
Follow-up	From year of first visit until 19 years of follow-up, or year of dementia or death, whichever happened first	Same
Assignment	Participants randomized at baseline who might be aware of their treatment group	Randomization emulated by adjusting for baseline covariates and adherence by adjusting for time-varying covariates
Outcome	Dementia screening yearly, and all deaths are preventable	Dementia dx derived from EHR, death as a censoring event

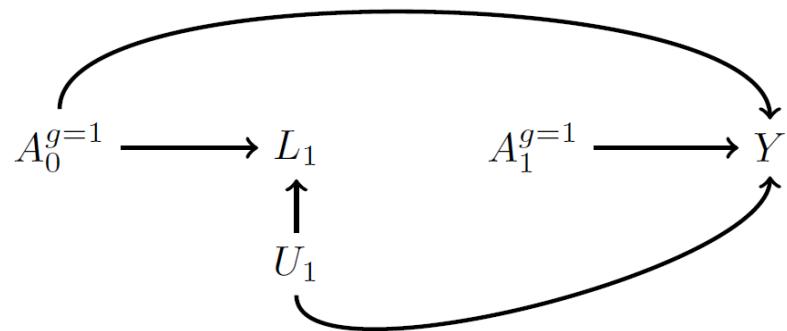
Section	Target trial protocol	Emulation using observational data
Eligibility criteria	Chinese, Black, Latinx, White ‐ < 85 years old ‐ Free of cardiovascular disease ‐ No dementia diagnosis at baseline	Same
Treatment strategies	0. Natural course (comparison arm) 1. Keep SBP < 120 mmHg 2. Keep SBP < 140 mmHg	Same strategies during the first 10 years of follow-up
Follow-up	From year of first visit until 19 years of follow-up, or year of dementia or death, whichever happened first	Same
Assignment	Participants randomized at baseline who might be aware of their treatment group	Randomization emulated by adjusting for baseline covariates and adherence by adjusting for time-varying covariates
Outcome	Dementia screening yearly, and all deaths are preventable	Dementia dx derived from EHR, death as a censoring event
Causal contrast	Controlled direct, per protocol effect	Same

Statistical Analysis

What would have happened if everyone had been randomized and adhered to each intervention (g)?

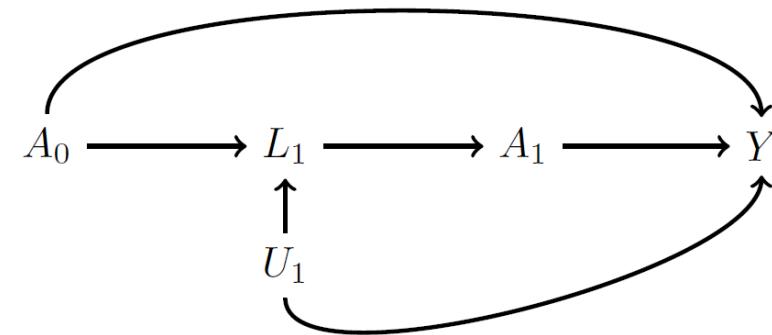
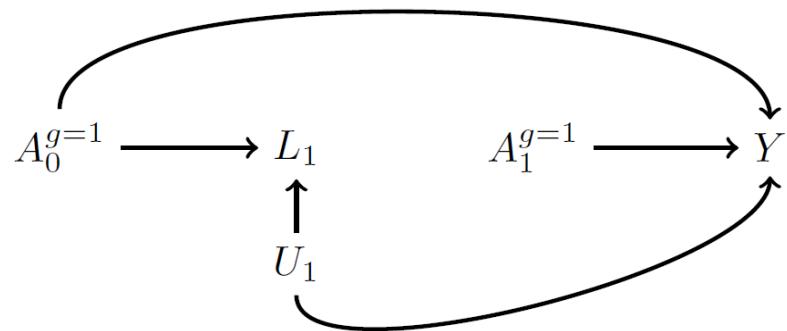
Statistical Analysis

What would have happened if everyone had been randomized and adhered to each intervention (g)?



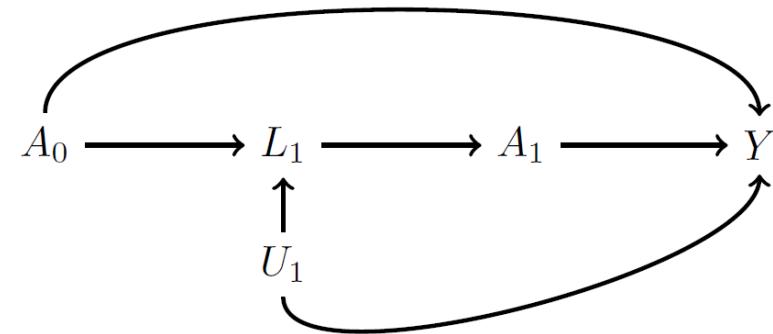
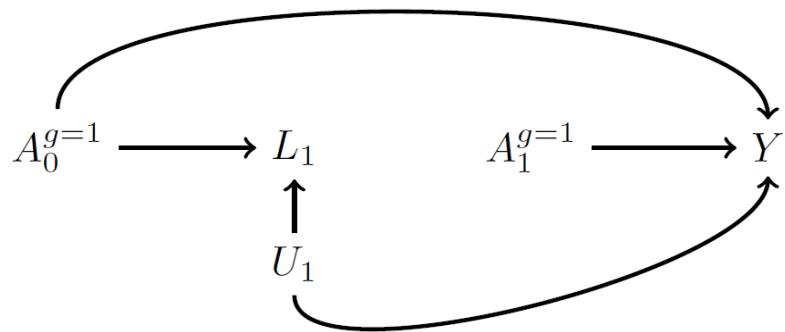
Statistical Analysis

What would have happened if everyone had been randomized and adhered to each intervention (g)?



Statistical Analysis

What would have happened if everyone had been randomized and adhered to each intervention (g)?



A = SBP, **L** = *Fixed covariates*: age, sex, education, income, health insurance, marital status, APOE- ϵ 4 genotype, history of diabetes. *Time-varying covariates*: SBP, cardiometabolic biomarkers, behavioral measurements, incident cardiovascular comorbidities **Y** = Dementia

G-formula

1. Model all variables using the covariate history

G-formula

1. Model all variables using the covariate history
2. Use coefficients to simulate longitudinal data on covariates and exposure, based on a random sample of baseline data

G-formula

1. Model all variables using the covariate history
2. Use coefficients to simulate longitudinal data on covariates and exposure, based on a random sample of baseline data
3. Replace exposure values based on the hypothetical intervention at every time-point

G-formula

1. Model all variables using the covariate history
2. Use coefficients to simulate longitudinal data on covariates and exposure, based on a random sample of baseline data
3. Replace exposure values based on the hypothetical intervention at every time-point
4. Estimate the predicted probability of the outcome based on the updated intervention

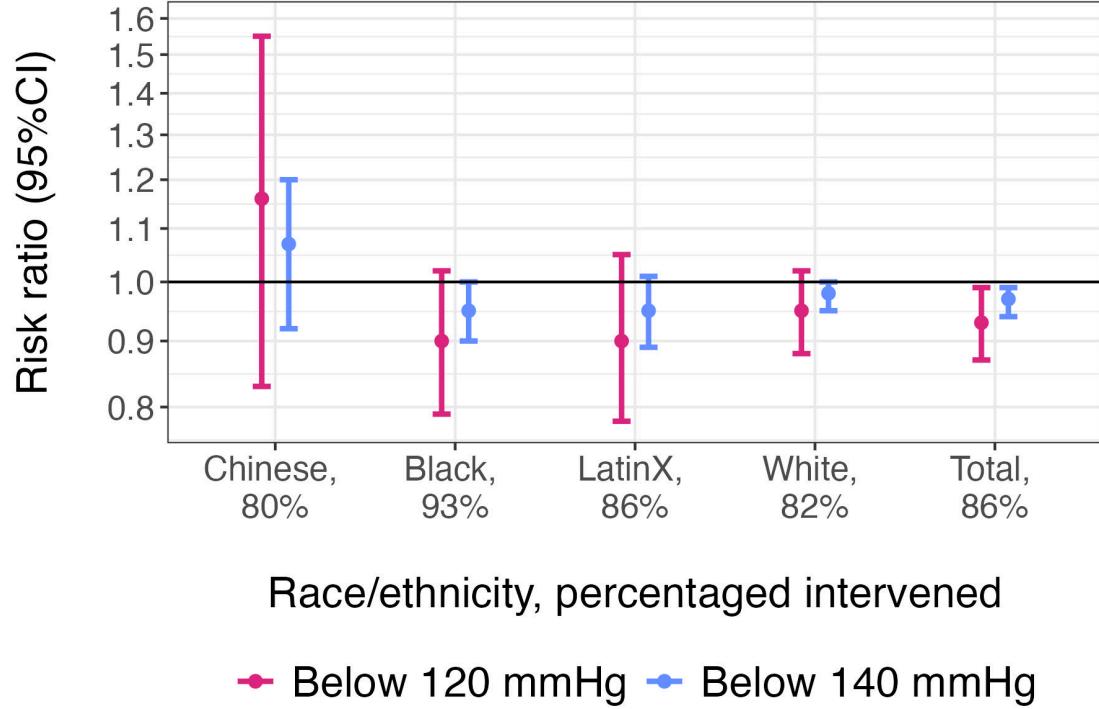
G-formula

1. Model all variables using the covariate history
2. Use coefficients to simulate longitudinal data on covariates and exposure, based on a random sample of baseline data
3. Replace exposure values based on the hypothetical intervention at every time-point
4. Estimate the predicted probability of the outcome based on the updated intervention
5. Calculate the average of the subject-specific risks and bootstrap CI

G-formula

1. Model all variables using the covariate history
2. Use coefficients to simulate longitudinal data on covariates and exposure, based on a random sample of baseline data
3. Replace exposure values based on the hypothetical intervention at every time-point
4. Estimate the predicted probability of the outcome based on the updated intervention
5. Calculate the average of the subject-specific risks and bootstrap CI
6. Repeat steps 2-6 for each hypothetical intervention

Results



Discussion

- Intensive blood pressure control appeared beneficial for Black, Latinx and White participants; while results for Chinese adults suggested possible harm, highlighting heterogeneity

Discussion

- Intensive blood pressure control appeared beneficial for Black, Latinx and White participants; while results for Chinese adults suggested possible harm, highlighting heterogeneity
- Findings suggest that Black and Latinx adults may require greater support to sustain intensive control

Discussion

- Intensive blood pressure control appeared beneficial for Black, Latinx and White participants; while results for Chinese adults suggested possible harm, highlighting heterogeneity
- Findings suggest that Black and Latinx adults may require greater support to sustain intensive control
- The target trial framework helps us refine research questions to estimate the impact of potentially implementable and equitable interventions

Discussion

- Intensive blood pressure control appeared beneficial for Black, Latinx and White participants; while results for Chinese adults suggested possible harm, highlighting heterogeneity
- Findings suggest that Black and Latinx adults may require greater support to sustain intensive control
- The target trial framework helps us refine research questions to estimate the impact of potentially implementable and equitable interventions
- It promotes transparency on the assumptions needed to estimate causal effects from observational data

Related Work

- **Rojas-Saunero LP**, Hilal S, Murray EJ, Logan RW, Ikram MA, Swanson SA. Hypothetical blood-pressure-lowering interventions and risk of stroke and dementia. *European Journal of Epidemiology*. 2021.
- Caniglia EC, **Rojas-Saunero LP**, Hilal S, Licher S, Logan R, Stricker B, Ikram MA, Swanson SA. Emulating a target trial of statin use and risk of dementia using cohort data. *Neurology*. 2020.
- *Triangulation of Innovative Methods to End Alzheimer's Disease (TIME-AD)* grant, P01AG082653-01A1: Collaborator, currently writing guidelines on target trial emulation

Target trial emulation in critical care

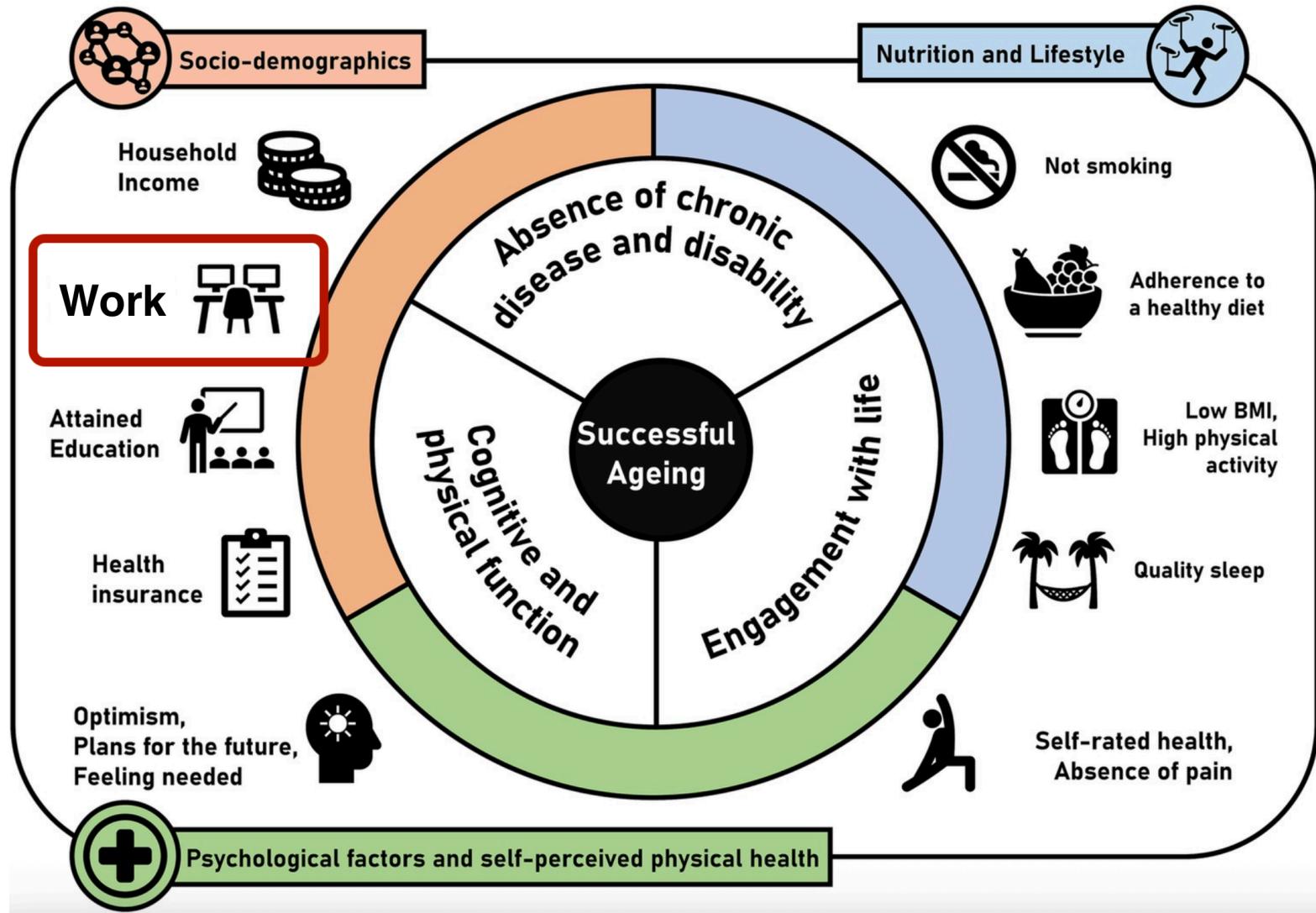
- Urner M, Jüni P, **Rojas-Saunero LP**, Hansen B, Brochard LJ, Ferguson ND, Fan E. Limiting Dynamic Driving Pressure in Patients Requiring Mechanical Ventilation. *Critical Care Medicine*. 2023.
- *INCEPTION* CIHR-funded grant: Co-I

Related Work

Target trial emulation for social determinants of health

- **Rojas-Saunero LP**, Labrecque JA, Swanson SA. Invited Commentary: Conducting and Emulating Trials to Study Effects of Social Interventions. *American Journal of Epidemiology*. 2022.
- Ikesu R, Wu Y, **Rojas-Saunero LP**, Nianogo R, Torres J, Kotwal A, Yusuke T, Ramirez C, Mayeda ER. Estimating the effects of hypothetical loneliness interventions on memory function among middle-aged and older adults in the United States. *Under review* 2025
- Wu Y, Zhou Y, **Rojas-Saunero LP**, Chen R, Gross AL, Nianogo R, Ritz BR, Mayeda ER. Effect of hypothetical education interventions on late-life memory function and decline among middle-aged and older adults in China. *Work in progress*.
- Wu Y, Ikesu R, **Rojas-Saunero LP**, Nianogo R, Gross AL, Ritz BR, Seamans MJ, Elser H, Mayeda ER. Emulating a target trial of sustained influenza vaccination and memory function and decline among middle-aged and older adults in the United States. *Work in progress*.

Future Directions



Occupational Determinants of Cognitive and Brain Health Among Middle-Aged and Older Latinxs

Early life to midlife: Do physical & mental job stressors shape cognitive function in Latina women from agricultural areas? (CHAMACOS)



Occupational Determinants of Cognitive and Brain Health Among Middle-Aged and Older Latinxs

Early life to midlife: Do physical & mental job stressors shape cognitive function in Latina women from agricultural areas? (CHAMACOS)

Mid- and Late Life: How do job stressors & occupational complexity relate to neuroimaging biomarkers? (SOL-INCA)



Occupational Determinants of Cognitive and Brain Health Among Middle-Aged and Older Latinxs

Early life to midlife: Do physical & mental job stressors shape cognitive function in Latina women from agricultural areas? (CHAMACOS)

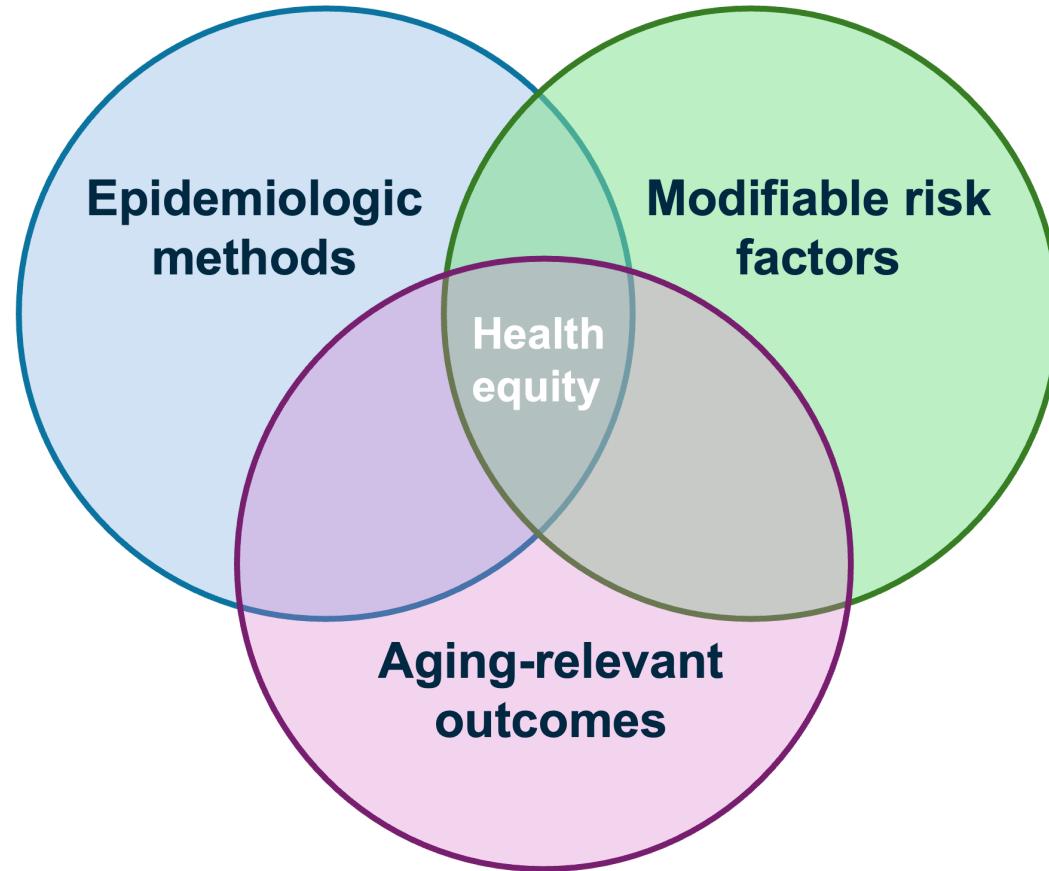
Mid- and Late Life: How do job stressors & occupational complexity relate to neuroimaging biomarkers? (SOL-INCA)

Hypothetical stochastic interventions: What much would cognitive decline change had we reduced job stressors and/or increased occupational complexity? Who benefits most? (SOL-INCA)

NIH | NIA K99/R00, Impact score: 16, *pending*



Potential Collaborations



- Epidemiology Data Center
- Center for Social Dynamics and Community Health
- Center for Aging and Population Health
- Aging Institute
- T-32 Epidemiology of Aging Training Grant Program

Potential Teaching

Core Epidemiology & Methods

- Intro to public health/epidemiology
- Advanced epidemiologic methods

Quantitative & Computational Tools

- Biostatistics for Public Health
- R Programming & Data Visualization
- Reproducibility and Open Science

Specialized Methods

- Causal Survival Analysis
- Target Trial Emulation for Time-varying Exposures

Specialized Topics

- Epidemiology of Aging
- Lifestyle intervention for noncommunicable chronic diseases
- Decolonizing Public Health

Mentors, students and collaborators

- Elizabeth Rose Mayeda, UCLA
(Postdoc Mentor)
- Sonja A. Swanson, Pitt (*PhD Mentor*)
- Alexander Ivan Posis, UC Davis
- Courtney S. Thomas Tobin, UCLA
- Dan Mungas, UC Davis
- Eleanor Hayes-Larson, USC
- Eleanor Murray, BU
- Ellen Caniglia, Penn
- Gilbert C. Gee, UCLA
- Hector Gonzalez, UCSD
- Hirám Beltrán Sánchez, UCLA
- Jian Li, UCLA
- Jessica G. Young, HSPH
- Joan Casey, UWashington
- Joey Fong, UCLA
- Lan Wen, U. Waterloo
- Laura Acion, Metadocencia
- M. Martha Tellez Rojo, INSP

- Marcia Pescador Jimenez, BU
- Maria M. Glymour, BU
- Mirella Díaz-Santos, UCLA
- Onyiebuchi A. Arah, UCLA
- Paola Gilsanz, KPNC
- Rachel Whitmer, UC Davis
- Roch A. Nianogo, UCLA
- Ron Brookmeyer, UCLA
- Ruijia Chen, BU
- Vanessa Didelez, Leibniz Inst.

Students

- Cecilia Curvale, Hosp. El Cruce
- Gina Nam, UCLA
- Kelly Guo, EMC
- Ryo Ikesu, UCLA
- Taylor Mobley, UCLA
- Yixuan Zhou, UCLA
- Yingyan Wu, UCLA

Academic communities

- Mayeda Research Group
- Practical Causal Inference Lab
- FSPH Rooted Academy
- MELODEM
- Equity for Latinx-Hispanic Healthy Aging (ELHA) Lab
- California Center for Population Research

Grant Support

- USC/UCLA Center on Biodemography and Population Health (PI)
- NIA R01AG074359 (Mayeda)
- NIA R01AG0603969 (Mayeda)
- NIA R01AG052132 (Mayeda)

Thank You, Gracias!

lp.rojassaunero@ucla.edu

Quantitative bias analysis for differential dementia diagnosis

We set the sensitivity of dementia diagnosis in the stroke group to 0.99 and considered a range (0.5 - 0.9) of sensitivity values in the no-stroke group

