June 18, 2026

MAYA B. MATHUR, PhD

Associate Professor
Departments of Medicine (Biomedical Informatics) & Pediatrics
School of Medicine
Stanford University
mmathur@stanford.edu
Google Scholar profile

RESEARCH INTERESTS – Statistical Methodology

Evidence synthesis, meta-analysis, causal inference, missing data, graphical models, epidemiologic methods

RESEARCH INTERESTS – Empirical

Farmed animal welfare, humane and sustainable food, behavior interventions, experimental social sciences

PRIMARY ACADEMIC POSITIONS

12/2024 – present **Associate Professor**
Primary appointments: Departments of Medicine (Quantitative Sciences Unit in Biomedical Informatics) and Pediatrics
Courtesy appointment: Epidemiology and Population Health
Stanford University

4/2020 – 11/2024 **Assistant Professor**
Primary appointments: Quantitative Sciences Unit, Biomedical Informatics, Pediatrics
Courtesy appointment: Epidemiology and Population Health
Stanford University

10/2019 – 3/2020 **Instructor**
Quantitative Sciences Unit, Biomedical Informatics, Pediatrics
Stanford University

9/2018 – 8/2019 **Postdoctoral fellow**
Department of Epidemiology
Harvard University
Advisor: Dr. Tyler VanderWeele

6/2014 – 9/2019 **Biostatistician**
Quantitative Sciences Unit
Stanford University

6/2013 – 6/2014 **Biostatistician**
Lab of Dr. Nayer Khazeni
Pulmonary & Critical Care Medicine
Stanford University

OTHER ACADEMIC POSITIONS

7/2020 - present **Associate Director**
Stanford Data Sciences' Center for Open and Reproducible Science (SDS-CORES)
Stanford University

EDUCATION

9/2015 - 8/2018 **PhD Biostatistics**
Harvard University
Advisor: Dr. Tyler VanderWeele
Dissertation: "Statistical methods for evidence synthesis"

11/2011 - 6/2013 **MS Statistics**
Stanford University
(Graduation with Distinction)

9/2009 - 6/2013 **BA Psychology**
Stanford University
(Phi Beta Kappa)

SELECTED HONORS AND AWARDS

(Additional honors for specific papers and proceedings appear under "Publications". Grants appear under "Research and Travel Grants".)

2025 **Scholars Research Fellowship**
The Brooks Institute for Animal Law & Policy

2024 **Early Career Epidemiologist Award**
American College of Epidemiology

2022 **Early Career Award**
Society for Research Synthesis Methodology

2022 **McCormick and Gabilan Faculty Award**
Stanford University

2022 **Brian MacMahon Early Career Award**
Society for Epidemiologic Research

2018 **Young Investigator Award**
American Statistical Association, Section on Statistics in Epidemiology

2017 **Distinction in Teaching**
Harvard University

2016 **Editor's Choice paper** (for Mathur & Reichling (2016))
Science Magazine

2015 **National Defense Science & Engineering Graduate Fellowship**

2013 **Psychology One Research Scholar**
Stanford University

2012 **Excellence in Undergraduate Teaching**
Stanford University

TEACHING – Stanford University

2023 **Health Research & Policy Department**
Instructor for course "Methods for Reproducible Population Health and Clinical Research"

2022 **Department of Pediatrics**
Instructor for independent study on design and conduct of choice-architecture experiments

2021–2022 **Biomedical Informatics Program**
Ethics lectures on reproducibility for National Institutes of Health training grant program

2021 **Stanford Center for Open and Reproducible Science (CORES)**
Co-instructor for the Fall Lecture Series of CORES

2021–2022 **Department of Pediatrics**
Instructor for independent study on statistical method development

Summer 2014 **School of Medicine**
Biostatistics mentor for "Intensive Course for Clinical Research" for clinical investigators

Spring 2012 **Department of Psychology**
TA for "Introduction to Statistical Methods (Precalculus)" for undergraduates
Excellence in Undergraduate Teaching Award

TEACHING – Harvard University

2020–present **Population Health Sciences Program**
Guest lecturer on mediation, interaction, replication, and meta-analysis
for PhD-level course: "Quantitative methods for the population health sciences"

2017–2019 **Population Health Sciences Program**
TA for PhD-level course: "Quantitative methods in population health sciences"
Distinction in Teaching Award (2017)

TEACHING – Other Venues

2021 **Joint Statistical Meetings**
Co-instructor for short course:
"Unmeasured confounding in real-world data analysis: strategies and analytics for sensitivity analyses"

2020 **Society for Epidemiologic Research Meeting**
Co-instructor for 4-hour educational symposium (150 registrants):
"E-values, unmeasured confounding, measurement error, and selection bias"

MENTORING AND ADVISING

2025–present	**Yasha Iravantchi** (MS Student in Epidemiology, Stanford University) My role: Primary advisor
2024–present	**Preeti Panda** (Assistant Professor in Emergency Medicine (Pediatrics), Stanford University) My role: Methods advisor on KL2
2020–2022	**Yuchen Zhang** (Statistics research intern, Stanford University) My role: Mentor for statistics internship
2024–2025	**Eric Bridgeford** (Postdoctoral fellow in Psychology, Stanford University) My role: Postdoctoral co-advisor
2023–present	**Giorgio Ricciardiello Mejia** (MS Student in Epidemiology, Stanford University) My role: Primary advisor
2023–present	**Anaïs Voski** (PhD Student in Environment and Resources) My role: Dissertation committee member
2023–present	**Anna Thomas** (PhD Student in Computer Science, Stanford University) My role: Primary advisor
2022–present	**Stephanie Chao** (Assistant Professor in Pediatrics, Stanford University) My role: Methods advisor on KL2
2022–present	**Rebecca Dang** (Instructor in Pediatrics, Stanford University) My role: Mentor on K proposal
2022–2023	**Mika Braginsky** (Postdoctoral fellow in Biomedical Informatics, Stanford University) My role: Postdoctoral advisor
2021–present	**Yi Li** (Statistics research intern, Stanford University) My role: Mentor for statistics internship
2021–2022	**Leon Tran King** (Statistics research intern, Stanford University) My role: Mentor for statistics internship; independent study instructor
2020–2022	**Guo-Qiang Zhang** (Statistics research intern, Stanford University) My role: Mentor for statistics internship
2020–present	**Pascal Geldsetzer** (Assistant Professor in Medicine, Stanford University) My role: Mentor on funded award from Stanford Diabetes Research Center; methods advisor via Stanford KL2 Mentored Career Development Program
2019–2021	**Maximilian Maier** (Research intern, Harvard University and Stanford University) My role: Summer internship mentor; senior author on student-led publication Mentee's current role: PhD student, University of Amsterdam

2020–present	**Lisa Bruckert** (Postdoctoral research fellow in Pediatrics, Stanford) My role: Post-award mentorship for a project funded by an internal grant for Stanford postdoctoral fellows
2021–2022	**Liz Chin** (Biomedical Data Science, Stanford University) My role: Dissertation committee member

LEADERSHIP – National Positions

2023	**National Institutes of Health** Expert panel member for working group on standardizing the conduct of nonrandomized studies in epidemic settings
2023–2025	**Institute of Education Sciences** Statistical and Research Methodology advisory board member for grant on "Consequences of Selective Reporting Bias in Education Research"

LEADERSHIP – Intramural Positions

2020–present	**Stanford Center for Open and Reproducible Sciences** Associate Director
2023–present	**Food Systems Working Group** Working group member advising on Stanford's Climate Action Plan

PROFESSIONAL SERVICE – Editorial and Peer Review Service

Ad hoc peer reviewer for: *American Journal of Epidemiology* (×6), *Annals of Applied Statistics* (×3), *Annals of Internal Medicine* (×2), *Biological Psychiatry*, *Biostatistics*, *Biometrical Journal*, *Biometrics* (×2), *BMC Medical Research Methodology* (×3), *BMJ* (×2), *Cleaner and Responsible Consumption* (×2), *Epidemiology* (×9), *European Journal of Epidemiology*, *JAMA*, *JAMA Network Open* (×2), *Journal of the Academy of Nutrition and Dietetics* (×2), *Journal of Internal Medicine*, *Journal of Personality*, *Journal of Psychology & Psychotherapy*, *Journal of Sport & Exercise Psychology*, *International Journal of Human-Computer Studies* (×2), *International Journal of Epidemiology* (×3), *Liver International* (×2), *Medical Decision-Making*, *Meta-Psychology* (×3), *Molecular Carcinogenesis* (×2), *Nature Human Behavior* (×2), *Observational Studies*, *Open Forum Infectious Diseases*, *Open Mind: Discoveries in Cognitive Science*, *PLOS One*, *Perspectives on Psychological Science* (×2), *Proceedings of the National Academy of Sciences* (×2), *Psychological Bulletin*, *Psychological Methods* (×3), *Psychological Science*, *Psychoneuroendocrinology* (×3), *Research Synthesis Methods* (×2), *Royal Society Open Science* (×7), *Statistics in Medicine* (×2), and *Systematic Reviews* (×2)

PROFESSIONAL SERVICE – Grant Proposal Reviewing

Study section member or reviewer for: NIH (BMRD study section; reviewed R01 and R21 applications), NIH (National Institute on Drug Abuse special emphasis panel; reviewed P01 applications), Templeton Foundation, ADIA Lab, and PCORI (Methods B review panel)

PROFESSIONAL MEMBERSHIPS

Member of: Society for Research Synthesis Methods and Society for Epidemiologic Research

ADVISORY BOARDS, AFFILIATIONS, AND CONSULTING

Faculty affiliations within Stanford: Bio-X, Wu Tsai Human Performance Alliance, Maternal & Child Health Research Institute, Stanford Program on Rigor & Reproducibility

Faculty affiliations at other universities: Human Flourishing Program (Harvard University)

Research advisory board memberships: Greener By Default

Consulting partnerships: Agency Fund

RESEARCH GRANTS AND GIFTS

Ongoing and Upcoming Support – As Principal Investigator

5/2026 - 4/2027 **Wellspring Philanthropic Fund**
"Statistical methods for a tournament of AI prediction of trial outcomes"

5/2026 - 4/2027 **Players Philanthropy Fund**
"Experiments on the small-body problem"

11/2023 - 11/2027 **Coefficient Giving (formerly Open Philanthropy)**
General gifts supporting the Stanford Humane & Sustainable Food Lab's research program

9/2024 - 8/2026 **The Brooks Institute for Animal Law & Policy**
"Developing and disseminating a multi-modal plant-based intervention in college dining halls"

9/2021 - 8/2026 **National Institutes of Health**
R01: "Statistical methods for modern evidence syntheses with multiple biases"

Ongoing Support – Other

8/2025 - 8/2026 **Doerr School of Sustainability, Stanford University**
"True cost of food: California as a testbed for exploring pathways to reduce meat and animal product consumption"
(PI: Deborah Sivas)
My role: Co-investigator, 0% FTE

4/2022 - 6/2026 **National Institutes of Health**
R01: "Building a causal pathway framework to identify interventions to eliminate racial/ethnic disparities in severe maternal morbidity"
(PI: Suzan Carmichael)
My role: Co-I, 8-15% FTE

Completed Support – As Principal Investigator

6/2024 - 6/2025 **Stanford Plant-Based Diet Initiative**

"Traditional And Contemporary Meat Options Study (TACOS): a hypothetical discrete-choice pilot study of the effect of the presence of plant-based meats on online menu selections"

6/2023 - 8/2024 **Food Systems Research Fund**
"Effectiveness of plant-based analogs for displacing consumption of animal-based foods"

8/2022 - 7/2024 **Stanford University**
McCormick and Gabilan Faculty Award
"Development of statistical methods and software for p-hacking in meta-analyses"

10/2023 - 9/2024 **Food Systems Research Fund**
"Effects of introducing plant-based meats on meat consumption in restaurants: Quasi-experimental analysis"

4/2023 - 4/2024 **Food Systems Research Fund**
"Effect of reducing meat portions on meat consumption and satisfaction: Expanded study in a university cafeteria"

7/2022 - 7/2023 **Stanford University School of Medicine**
Early-career award providing general research support

12/2021 - 7/2023 **Food Systems Research Fund**
"Effect of reducing meat portions on meat consumption and satisfaction"

10/2020 - 12/2022 **Food Systems Research Fund**
"Development and validation of a simple educational intervention to encourage plant-based eating"

9/2019 - 8/2021 **Pershing Square Fund for Research on the Foundations of Human Behavior**
"Psychologically-informed appeals to reduce meat consumption: Meta-analysis, theoretical review, and intervention development"

12/2019 - 8/2020 **John E. Fetzer Memorial Trust**
"Sensitivity analysis for publication bias in meta-analyses: Development of novel statistical methods and results in meta-analyses across disciplines"

Completed Support – Other

9/2017 - 6/2023 **National Institutes of Health**
R01: "Wise social psychological interventions to improve outcomes of behavioral weight control in children with obesity"
(PI: Thomas N. Robinson)
My role: Faculty biostatistician, 5% FTE (2021-2024)

4/2019 - 3/2024 **Centers for Disease Control**
"Packaging and spreading the Stanford Pediatric Weight Control Program: A family-based, group, behavioral weight control program for children with obesity

and their families"
(PI: Thomas N. Robinson)
My role: Faculty biostatistician, 5% FTE (2021-2024)

5/2019 - 2/2024 **National Institutes of Health**
K24: "Patient oriented research in vulnerable populations with skin disease"
(PI: Eleni Linos)
My role: Biostatistician, 10% FTE (2021 - 2024)

1/2022 - 12/2023 **Centre for Effective Altruism**
"Meta-analysis on substitution effects during efforts to reduce animal product consumption"(PI: Jo Anderson)
My role: Co-I, 0% FTE (2022 - 2023)

1/2021 - 12/2022 **National Institutes of Health**
R01: "Theory and methods for mediation and interaction"
(PI: Tyler VanderWeele)
My role: Biostatistician, 10% FTE (2021 - 2022)

1/2021 - 12/2021 **Stanford University Maternal & Child Health Research Institute**
"Measuring children's early vocabulary using large scale data from diverse families"
(PI: Michael C. Frank)
My role: Biostatistician, 2% FTE (2021)

3/2017 - 8/2019 **Harvard University Mind, Brain, & Behavior Program**
Graduate Student Award
"Uncanny but not confusing: Multisite study of perceptual category confusion in the Uncanny Valley"
My role: Lead investigator

9/2015 - 8/2018 **United States Department of Defense**
National Defense Science & Engineering Graduate Fellowship
Full support and stipend for PhD studies

4/2017 **Harvard University Mind, Brain, & Behavior Program**
Graduate Student Award
For psychology conference attendance

8/2012 - 9/2013 **Stanford University**
Undergraduate Research Grant
"Spatiotemporal dynamics and a prognostic model of healthcare utilization following 2009 (H1N1) pandemic in New York state"
My role: Lead investigator

10/2012 **Stanford University**
Undergraduate Conference Grant
For medical conference attendance

6/2011 - 8/2011 **Stanford University**
Psych-Summer Research Grant
"Using a head-mounted camera to investigate social referencing during naturalistic

word learning"
My role: Undergraduate research assistant

STATISTICAL SOFTWARE DEVELOPED – R Packages

1. R package `multibiasmeta`
   Conducts corrections and sensitivity analyses for within-study and/or across-study biases in meta-analyses.
   Contributors: Braginsky M & **Mathur MB**.
2. R package `metabias`
   Provides common components (classes, methods, documentation) for meta-analysis packages.
   Contributors: Braginsky M & **Mathur MB**.
3. R package `truncnormbayes`
   Conducts Bayesian estimation of the parameters of a truncated normal distribution.
   Contributors: Braginsky M, King LT, & **Mathur MB**.
4. R package `phacking`
   Conducts sensitivity analysis for p-hacking in meta-analyses.
   Contributors: Braginsky M & **Mathur MB**.
5. R package `regmedint`
   Conducts regression-based causal mediation analysis.
   Contributors: Yoshida K, Li Y, & **Mathur MB**.
6. R package `PublicationBias`
   Conducts sensitivity analyses for publication bias in meta-analyses.
   Contributors: **Mathur MB**, Wang R, & VanderWeele TJ.
7. R package `MetaUtility`
   Contains functions to estimate the proportion of effects stronger than a threshold of scientific importance, to make various effect size conversions, and to compute and format inference in a meta-analysis.
   Contributors: **Mathur MB** & VanderWeele TJ.
8. Stata module `EVALUE`
   Conducts sensitivity analyses for unmeasured confounding in observational studies.
   Contributors: Linden A, **Mathur MB**, VanderWeele TJ.
9. R package `NRejections`
   Computes metrics of outcome-wide evidence strength for studies testing multiple correlated outcomes.
   Contributors: **Mathur MB** & VanderWeele TJ.
10. R package `EValue`
    Conducts sensitivity analyses for unmeasured confounding or selection bias in observational studies and meta-analyses.
    Contributors: **Mathur MB**, Ding P, Smith L, & VanderWeele TJ.
11. R package `Replicate`
    Conducts statistical analyses for multisite replication projects.
    Contributors: **Mathur MB** & VanderWeele TJ.
12. R package `SimTimeVar`
    Simulates a longitudinal dataset with time-varying covariates with user-specified correlation

structures across and within clusters.
Contributors: **Mathur MB**, Kapphahn K, Garcia A, Desai M, Montez-Rath M.

STATISTICAL SOFTWARE DEVELOPED – Online Tools

1. Online tool to conduct sensitivity analyses for unmeasured confounding in meta-analyses [Link]
   Contributors: **Mathur MB**, Ding P, Smith L, VanderWeele TJ, Solymos P, Lee J.
2. Online tool to conduct sensitivity analyses for unmeasured confounding in observational studies [Link]
   Contributors: **Mathur MB**, VanderWeele TJ, Solymos P.

ORGANIZED CONFERENCE SESSIONS

2021 — Joint Statistical Meetings
Chair: "Recent methodological developments and applications in statistical and machine learning approaches for predictive modeling using competing risk data"

2019 — Joint Statistical Meetings (Denver, CO)
Organizer and chair: "Causal inference with non-traditional designs"

INVITED PRESENTATIONS – Keynote Talks

2024 — Inaugural Berkeley-Stanford Workshop on Veridical Data Science (Berkeley, CA)
"Replication puzzles and hidden effect modifiers"
[Video of talk]

2021 — Massachusetts Psychiatric Society Annual Psychopharmacology Update Conference (Waltham, MA)
"Help for clinicians in understanding unmeasured confounding in observational psychiatric research"

INVITED PRESENTATIONS – International

Venues without locations listed are those that have international audiences but were held virtually.

2025 — International Statistics Institute (ISI) World Statistics Congress (The Hague, NL)
"A common-cause principle for eliminating selection bias in causal estimands via covariate adjustment"

2025 — Department of Epidemiology, University of Copenhagen (Copenhagen, DK)
"Resurrecting complete-case analysis: A defense"

2023 — Online Causal Inference Seminar
"A common-cause principle for eliminating selection bias in causal estimands via covariate adjustment"

2023 — North American Animal Law Conference & Canadian Animal Law Conference University of Toronto (Toronto, Canada)
"Nudges to reduce consumption of meat and animal products: The state of the scientific evidence"
[Video of talk]

2023	Formo Food Summit (Berlin, Germany) "Nudges to reduce animal-based food consumption: Current and future research"
2023	Evidence Synthesis and Meta-Analysis in R Conference Invited panelist for session: "Controlling for publication bias: Challenges & future directions"
2023	Departement d'Études Cognitives, École Normale Supérieure (Paris, France) "How robust are meta-analyses to publication bias? Sensitivity analyses and empirical findings"
2023	Online Causal Inference Seminar "Discussion of bounds on selection bias" [Video of talk]
2022	International Day of Women in Statistics and Data Science "Work-life balance: Naïve perspectives from an early-career researcher"
2021	37^{th} Annual Meeting of the International Society for Traumatic Stress Studies "Applied causal mediation analysis"
2021	8^{th} Annual Nordic-Baltic Biometric Conference (Helsinki, Finland) "Avoiding significance fetishism in meta-analyses: Pitfalls and reporting recommendations"
2021	16^{th} Annual Meeting of the Society for Research Synthesis Methodology "Sensitivity analysis for for p-hacking in meta-analyses"
2021	Centre for Clinical Epidemiology, Lady Davis Institute, Jewish General Hospital (Montreal, Canada) "How robust are meta-analyses to publication bias? New statistical methods and empirical findings across meta-analyses"
2021	Editorial board meeting of *Psychological Bulletin* "How robust are meta-analyses to publication bias? New statistical methods and empirical findings across meta-analyses"
2020	Joint Statistical Meetings Invited discussant for session: "Unsupervised learning with latent variables for biobehavioral research"
2020	Joint Statistical Meetings "The E-value: Sensitivity analyses for unmeasured confounding and extensions to meta-analysis"
2020	Compassion in World Farming (Godalming, UK) Research Lunch Series "Reducing meat consumption by appealing to animal welfare: Meta-analysis and evidence-based recommendations"
2019	Launch conference for the multinational study: "REACH Forgiveness Workbook Intervention Randomized Trial"

City University of Hong Kong (Hong Kong)
"Statistical analysis proposal and discussion points"

2019 Department of Biostatistics, University of Copenhagen (Copenhagen, DK)
"The E-value: Practical sensitivity analysis and technical considerations"

2019 Danish Epidemiology Society (Copenhagen, DK)
"Sensitivity analysis for unmeasured confounding in studies and meta-analyses"

2018 Joint Statistical Meetings (Vancouver, BC)
"The E-value: Sensitivity analysis, software, and implementation"

INVITED PRESENTATIONS – Extramural presentations in U.S.A.

2026 Society for Epidemiologic Research Annual Mid-Year Meeting
"Estimating conditional means under missingness not at random with incomplete auxiliary variables"

2026 Society for Epidemiologic Research Annual Mid-Year Meeting
"Beyond publication bias: Assessing p-hacking in meta-analyses"

2025 University of California at Los Angeles (Los Angeles, CA)
Practical Causal Inference Lab Seminar
"Resurrecting complete-case analysis: A defense"

2025 University of California at Davis (Davis, CA)
Epidemiology Seminar
"A common-cause principle for eliminating selection bias in causal estimands via covariate adjustment"

2025 San Francisco Bay Area Chapter of the American Statistical Association (San Francisco, CA)
"A common-cause principle for eliminating selection bias in causal estimands via covariate adjustment"

2024 Harvard University (Boston, MA)
Design of Experimental and Non-experimental Studies Seminar Series
Department of Health Care Policy
"Beyond the funnel plot: New methods to address p-hacking and other biases in meta-analysis"

2024 Carnegie Mellon University (Pittsburgh, PA)
Causal Group Seminar
"A common-cause principle for eliminating selection bias in causal estimands via covariate adjustment"

2024 Joint Statistical Meetings (Portland, OR)
"A common-cause principle for eliminating selection bias in causal estimands via covariate adjustment"

2024 University of North Carolina at Chapel Hill (Chapel Hill, NC)

Causal Inference Research Group Seminar, Department of Epidemiology
"A common-cause principle for eliminating selection bias in causal estimands via covariate adjustment"

2024 Columbia University (New York, NY)
Causal Learning Group Seminar, Department of Biostatistics
"A common-cause principle for eliminating selection bias in causal estimands via covariate adjustment"

2024 Northwestern University (Chicago, IL)
Animal Welfare & Climate Change Symposium, Pritzker School of Law
Invited panelist for session: "Reducing the demand for inexpensive meat"

2024 Harvard University (Boston, MA)
Animal Law & Policy Workshop Series, Harvard Law School
"Effect of a default portion-size reduction on meat consumption and diner satisfaction: Controlled experiments in Stanford University dining halls"

2023 University of Pittsburgh (Pittsburgh, PA)
Epidemiology Seminar, Department of Epidemiology
"A common-cause principle for eliminating selection bias in causal estimands via covariate adjustment"

2023 Net-Zero MZ-ECO Sustainability Gala (Palo Alto, CA)
C&L Sustainability Foundation
Closing speech: "Toward a plant-based food system: Why and how"

2023 Wake Forest University (Baltimore, MD)
Department of Biostatistics and Data Science
"A common-cause principle for eliminating selection bias in causal estimands via covariate adjustment"

2023 Menus of Change University Research Collaborative (MCURC) Annual Meeting (Palo Alto, CA)
"The SCOOP study: Spoon Capacity Outcomes on Protein Serving Size and Satisfaction"

2023 Johns Hopkins University (Baltimore, MD)
Causal Seminar, Department of Biostatistics
"A common-cause principle for eliminating selection bias in causal estimands via covariate adjustment"
[Video of talk]

2023 Mental Health Research Network, Kaiser Permanente (Seattle, WA)
"Avoiding significance fetishism in meta-analyses: Pitfalls and reporting recommendations"

2023 Society for Epidemiologic Research Conference (Portland, OR)
"Causal graphs clarify connections between confounding and selection bias"

2023 Harvard conference on "Forgiveness: Interdisciplinary Perspectives" (Boston, MA)
Co-presenter: "International REACH Forgiveness intervention: A randomized trial"

2023 Eastern North American Region (ENAR) Spring Meeting (Nashville, TN)
"Avoiding significance fetishism in meta-analyses: Pitfalls and recommendations"

2022 BIO-PhRMA (Washington, DC)
Workshop on Advancing Analytical Methodologies for Unmeasured Confounders in Real-world Evidence
"Closing perspectives: Confounding and the credibility of observational studies"

2022 BIO-PhRMA (Washington, DC)
Workshop on Advancing Analytical Methodologies for Unmeasured Confounders in Real-world Evidence
"E-values for sensitivity analysis and recent extensions"

2022 Harvard University (Boston, MA)
Epidemiology Seminar Series
"How robust are meta-analyses to publication bias? Sensitivity analyses and empirical findings"
[Video of talk]

2022 Society for Epidemiologic Research Conference (Chicago, IL)
Plenary talk: "Sensitivity analysis for publication bias and p-hacking in meta-analyses"

2022 4^{th} Annual Reducetarian Summit (San Francisco, CA)
"Principles for designing rigorous intervention studies of dietary outcomes"

2022 American Educational Research Institute (Washington, DC)
Systematic Review & Meta-Analysis Seminar Series
"Sensitivity analysis for uncontrolled confounding in meta-analyses: Applications to meta-analysis on BMI and mortality"
[Video of talk]

2021 Boston University (Boston, MA)
Causal Inference Seminar, Departments of Statistics and Biostatistics
"Extending the E-value: Sensitivity analyses for unmeasured confounding in studies and meta-analyses"

2021 United States Environmental Protection Agency, Region 6 (Dallas, TX)
"Interventions to reduce consumption of meat and animal products: The state of the scientific evidence"

2021 Brigham Young University (Provo, UT)
Neuroscience Seminar
"Addressing unmeasured confounding in observational studies using statistical sensitivity analyses"

2020 Yale University (New Haven, CT)
Veteran's Aging Cohort Study, Statistics Working Group
"An introduction to marginal structural models"

2020 Yale University (New Haven, CT)

Veteran's Aging Cohort Study, Statistics Working Group
"An introduction to causal mediation analysis"

2019 Yale University (New Haven, CT)
Veteran's Aging Cohort Study, Statistics Working Group
"Sensitivity analyses for unmeasured confounding in studies and meta-analyses"

2019 12^{th} Annual FDA/AdvaMed Medical Devices and Diagnostics Statistical Issues Conference (Washington, DC)
"Confounding and methods for sensitivity analysis in observational studies"

2019 Northwestern University (Evanston, IL)
Prevention Science and Methodology Group, Virtual Ground Rounds
"Sensitivity analyses for unmeasured confounding in studies and meta-analyses"
[Video of talk]

2019 University of Alabama at Birmingham (Birmingham, AL)
Biostatistics Seminar
"Sensitivity analysis for unmeasured confounding in studies and meta-analyses"

2017 University of Massachusetts at Amherst epidemiology seminar (Amherst, MA)
"The E-value: Sensitivity analysis, software, and implementation"

2009 Centers for Disease Control National Immunization Conference (Dallas, TX)
"Predictors of human papillomavirus vaccination and participation in vaccine decision-making among high school girls"
[Audio recording of talk]

2008 American Public Health Association National Meeting (San Diego, CA)
Invited panelist for session: "Inspiring a new generation to address global health"

2008 California Medical Association Foundation HPV Vaccine Summit Meeting (Sacramento, CA)
"Predictors of human papillomavirus vaccination and participation in vaccine decision-making among high school girls"

2005 NASA Jet Propulsion Laboratories Mars Mission Control Team (Pasadena, CA)
"Exploring the Uncanny Valley: Quantitative test of a theory on emotional responses to humanoid robotic faces"

CONTRIBUTED PRESENTATIONS

2025 Society for Epidemiologic Research Conference (Boston, MA)
"Resurrecting complete-case analysis: A defense"

2023 Society for Epidemiologic Research Conference (Portland, OR)
"The M-value: Sensitivity analysis for missing data"

2023 Atlantic Causal Inference Conference (Austin, TX)
"A common-cause principle for eliminating selection bias in causal estimands via covariate adjustment"

2021 Society for the Improvement of Psychological Science
"Statistical frontiers for selective reporting and publication bias"
Workshop given with co-presenter, James E. Pustejovsky

2021 Animal Advocacy Conference
"Interventions to reduce meat consumption by appealing to animal welfare: Meta-analysis and evidence-based recommendations"

2021 Evidence Synthesis and Meta-Analysis in R Conference
"R package PublicationBias: Simple sensitivity analysis for publication bias"
[Video of talk]

2021 Berkeley Institute for Transparency in the Social Sciences Annual Meetings
"Estimating publication bias in meta-analyses of peer-reviewed studies: A meta-meta-analysis"

2019 Berkeley Institute for Transparency in the Social Sciences Annual Meeting (Berkeley, CA)
"Sensitivity analysis for publication bias in meta-analyses"
[Video of talk]

2019 Harvard University Applied Statistics Workshop (Boston, MA)
"Sensitivity analysis for publication bias and selective reporting in meta-analyses"

2018 Joint Statistical Meetings (Vancouver, BC)
"Multiple imputation strategies for handling missing data when generalizing randomized clinical trial findings through propensity score-based methodologies"

2018 Joint Statistical Meetings (Vancouver, BC)
"Sensitivity analysis for unmeasured confounding in meta-analysis"

2017 Berkeley Institute for Transparency in the Social Sciences Annual Meeting (Berkeley, CA)
"New statistical metrics for multisite replications"
[Video of talk]

BOOKS

1. Frank MC, Braginsky M, Cachia J, Coles NA, Hardwicke TE, Hawkins RD, **Mathur MB**, Williams R. (2025). Experimentology: An open science approach to experimental methods. *MIT Press*, ISBN 978-0-262-55256-1. Also publicly available: https://doi.org/10.25936/3JP6-5M50.

PEER-REVIEWED PUBLICATIONS – In Press or Accepted

Contributions are listed for middle- and last-authored papers.
Underlined: Paper led by my student, mentee, or staff scientist.

1. Tsui A, Carstensen A, Kachergis G, Abubakar A, Mulat Asnake, Barry O, et al., including **Mathur MB** (in press). Exploring variation in infants' preference for infant-directed speech: Evidence from a multi-site study in Africa. *Developmental Science*.
   Contribution: Advised on methodology and statistical analysis.
2. Szabo YZ, Nishimi K, Smirnova M, Niles A, Lerche AS, Tsai H, Afroz S, Huey N, **Mathur MB**, & O'Donovan A (in press). Sex-specific associations of depression and inflammatory markers: A

systematic review and meta-analysis. *Translational Psychiatry.*

Contribution: Advised on methodology and statistical analysis.

3. **Mathur MB**, Shpitser I, VanderWeele TJ (in press). Resurrecting complete-case analysis: A defense. *American Journal of Epidemiology.*
4. Bridgeford EW, Caffo BS, **Mathur MB**, Poldrack RA (in press). How causal perspectives can inform neuroscience data analysis. *Nature Neuroscience.*

   Contribution: Contributed to conception and writing.
5. Pathmarajah P, Li S, **Mathur MB**, Johnson A, Marinkovich MP, Admani S, Eid E, Tu J, Mitchell DC, Perrone L, Villanueva Gaona R, Teng J, Tang JY, Chiou AS (in press). Validation of the Investigator Global Assessment Scale for epidermolysis bullosa simplex. *JEADV Clinical Practice.*

   Contribution: Advised on methodology and statistical analysis.

PEER-REVIEWED PUBLICATIONS – Published Original Research

Contributions are listed for middle- and last-authored papers.
Underlined: Paper led by my student or mentee.

6. Hope J, Green SA, Peacock JR, **Mathur MB** (2026). Effects of adding plant-based menu options on meat selection frequency: A randomized controlled experiment. *Food Quality and Preference*, 143, 105931.
7. **Mathur MB**, VanderWeele TJ, Shpitser I (12/25). A common-cause principle for eliminating selection bias in causal estimands through covariate adjustment. *The Annals of Statistics*, 53(6): 2303-2328.
8. Thomas AT, Yee A, **Mathur MB**, Jurafsky D, Gligorić K (5/25). What can large language models do for sustainable food? *Proceedings of the 42nd International Conference on Machine Learning, PMLR* 267:59377-59433.

   Contribution: Advised on methodology and writing. Note: In computer science, conference proceedings are the primary publication outlet.
9. Koh HK, Frederick DE, Balboni TA, O'Reilly SM, Kelly JF, Humphreys K, Botticelli M, **Mathur MB**, Psimopoulos C, Long KN, VanderWeele TJ (in press). Spirituality & harmful or hazardous drug use: Meta-analysis of longitudinal studies and implications. *JAMA Psychiatry,* 83(4):364–378.

   Contribution: Advised on design, statistical analyses, and interpretation.
10. Madley-Dowd P, Hughes RA, **Mathur MB**, Heron J, Tilling K (2/26). Using directed acyclic graphs to determine whether multiple imputation or subsample multiple imputation estimates of an exposure-outcome association are unbiased. *American Journal of Epidemiology*, 195(2):505-514.
11. Tsai JL, Chen DS, Yang AM, Cachia JYA, Blevins E, Ko M, **Mathur MB**, et al. (12/2025). A meta-analytic review of cultural variation in affect valuation. *Psychological Bulletin*, 151(12):1486-1524.
12. Thomas AT, Hope J, **Mathur MB** (9/25). Documentary films can increase public interest in plant-based diets in the USA. *Nature Food*, 6(9), 837-842.
13. Voski A, Braginsky M, Zhang A, Bertoldo J, Egan S, Levig LA, Ihrig MM, **Mathur MB** (5/25). Effect of a portion-size default nudge on meat consumption and diner satisfaction: Controlled experiments in Stanford University dining halls. *BMC Public Health*, 25 (1), 1434.

14. Green SA, Smith BA, **Mathur MB** (1/26). Meaningfully reducing consumption of meat and animal products is an unsolved problem: A meta-analysis. *Appetite*, 216(1), 108233.
    - Covered by *Vox*
15. **Mathur MB** & Shpitser I (6/25). Pitfalls of imputing using incomplete auxiliary variables. *American Journal of Epidemiology*, 194(6), 1801-1802.
16. **Mathur MB** (5/25). On the statistical analysis of studies with attention checks. *Advances in Methods and Practices in Psychological Science*, 8(2), 1–16.
17. **Mathur MB** (1/25). On the statistical analysis of experiments with manipulation checks. *Advances in Methods and Practices in Psychological Science*, 8(1), 1–11.
18. **Mathur MB** (4/25). Meta-analysis with Jeffreys priors: Empirical frequentist properties. *Research Synthesis Methods*, 16(1), 87–122.
19. Panda P, Deng Y, Frang A, Ward V, Wang E, Newberry J, **Mathur MB**, Patel A (1/2025). Increased emergency department identification of youth experiencing trafficking during the COVID-19 pandemic: An interrupted time series analysis. *Public Health Reports*, 140(1_suppl), 74S–81S.
    Contribution: Advised on methodology and statistical analysis.
20. Ricotta EE, Carrillo FAB, Angelli-Nichols S, Barugahare J, Benton A, Carlson CJ, Chang-Rabley E, Dean N, Duda SN, Federer L, Fill MMA, LeRoy EC, Linton NM, Lipsitch M, **Mathur MB**, Phelan AL, Rid A, Rosen JB, Sauer L, Sullivan SG, Zendt M, Evans NG. (2/25). Observational research in epidemic settings: A roadmap to reform. *BMJ Global Health,* 10, e017981.
21. **Mathur MB** & Shpitser I (1/25). Simple graphical rules for assessing selection bias in selected-sample and general-population treatment effects. *American Journal of Epidemiology*, 194(1), 267–277.
22. Zhang G, Tynelius P, **Mathur MB**, Quartagno M, Branden G, Lijeros F, Kosidou K (12/24). Population trends and individual fluidity of sexual identity in Stockholm County, 2010 to 2021. *JAMA Network Open*, 7(12):e2447627.
    Contribution: Advised on methodology, statistical analysis, and interpretation of results.
23. Li LZ, Yang P, Singer SJ, Pfeffer J, **Mathur MB**, Shanafelt T (10/24). Nurse burnout and patient safety, satisfaction, and quality of care: A meta-analysis. *JAMA Network Open*, 7(11):e2443059.
    Contribution: Advised on methodology, statistical analysis, and interpretation of results.
24. Winslow J & **Mathur MB** (2/25). Reanalysis of "A longitudinal study of meat reduction over time in the UK." *Food Quality and Preference*, 123, 105324.
25. Bane S, Carmichael S, **Mathur MB**, Simard J (9/24). Considering pregnancies as repeated versus independent events: An empirical comparison of common approaches across selected perinatal outcomes. *American Journal of Obstetrics & Gynecology Maternal-Fetal Medicine,* 6(8), 101434.
    Contribution: Advised on methodology and statistical analysis.
26. Kurniati NMT, Cowden RG, Zulkaida A, Gunatirin EY, Rahardjo W, Elizabeth MP, Suryani AI, Cynthia T, Rini QK, **Mathur MB**, Ho MY, VanderWeele TJ, Worthington EL (8/24). A randomized controlled trial of a brief self-directed secular REACH forgiveness intervention with Indonesian Christians: Does religiousness matter? *Spirituality in Clinical Practice*, 11(3), 297–314.
    Contribution: Advised on methodology and statistical analysis.

27. Zhao D, Cheng S, Tsui R, **Mathur MB**, Wang CJ (5/24). Risk of aircraft-acquired COVID-19 transmission during commercial flights: A systematic review. *International Journal of Environmental Research and Public Health*, 21(6), 654.

    Contribution: Advised on methodology and statistical analysis; contributed to writing.

28. Boyce V, Mathur MB, Frank MC (11/23). Eleven years of student replication projects provide evidence on the correlates of replicability in psychology. *Royal Society Open Science*, 10:231240.

29. **Mathur MB** (3/24). Assessing robustness to worst-case publication bias using a simple subset meta-analysis. *BMJ*, 384:e076851.

30. Zettersten M, Cox CM, Bergmann C, Tsui A, Soderstrom M, Mayor J, Lundwall RA, Lewis M, Kosie J, Kartushina N, Fusaroli R, Frank MC, Byers-Heinlein KB, Black AK, **Mathur MB** (4/24). Evidence for infant-directed speech preference is consistent across large-scale, multi-site replication and meta-analysis. *Open Mind*, 8, 439–461.

31. **Mathur MB** & Mathur VS (5/24). Toward evidence-based communication on overweight body mass index and mortality. *BMC Medicine*, 22(1):183.

32. Ho MY, Worthington EL, Cowden RG, Bechara AO, Chen ZJ, Gunatirin EY, Joynt S, Khalanskyi VV, Kurniati NMT, Rodriguez N, Salnykova A, Shtanko L, Tymchenko S, Voytenko VL, Zulkaida A, **Mathur MB**, VanderWeele TJ (3/24). International REACH forgiveness intervention: A multi-site randomized controlled trial. *BMJ Public Health*, 2:e000072.

33. Bechara AO, Chen ZJ, Cowden RG, Worthington EL, Toussaint L, Rodriguez N, Murillo HG, Ho MY, **Mathur MB**, VanderWeele TJ (3/24). Do forgiveness campaign activities improve forgiveness, mental health, and flourishing? *International Journal of Public Health*, 69:1605341.

34. **Mathur MB** (1/24). Sensitivity analysis for the interactive effects of internal bias and publication bias in meta-analyses. *Research Synthesis Methods*, 15(1), 21–43.

35. **Mathur MB** (1/24). P-hacking in meta-analyses: A formalization and new meta-analytic methods. *Research Synthesis Methods*, 15(3), 483-499.

36. Marcone AL, Darmstadt GL, Amsler Challamel G, **Mathur MB**, Gardner CD. (9/23). Effects of an educational planetary plate graphic on meat consumption in Stanford University dining hall: A randomized controlled trial. *BMC Nutrition*, 9(106).

    ⋆: Advised on methodology, statistical analysis, and interpretation of results.

37. Rivera N, Nguyen K, Kalami V, Qin F, **Mathur MB**, Blankenburg R, Yeh AM (9/23). A Specific Carbohydrate Diet virtual teaching kitchen promotes knowledge and confidence in caregivers of pediatric patients with inflammatory bowel disease *Nutrients*, 15(18):3999.

38. Li Y, Kaufman J, **Mathur MB** (9/23). A brief primer on conducting regression-based causal mediation analysis. *Psychological Trauma: Theory, Research, Practice, and Policy*, 15(6):930-938.

    Contribution: Conceived and guided project as senior author.

39. Li Y, **Mathur MB**, Solomon DH, Glynn RJ, Yoshida K (9/23). Effect measure modification by covariates in mediation: Extending regression-based causal mediation analysis (9/23). *Epidemiology*, 34(5):661-672.

    Contribution: Advised on development of theory, applied examples, and contributed significantly to manuscript writing.

40. Zhang GC, Basna R, **Mathur MB**, Lässer C, Mincheva R, Ekerljung L, Wennergren G, Radinger M, Lundback B, Kankaanranta H, Nwaru BI. (9/23). Exogenous female sex steroid hormones and new onset asthma in women: A matched case-control study. *BMC Medicine*, 21:337.

    Contribution: Advised on methodology, statistical analysis, and interpretation of results.

41. Hunt IJ, Cai ZR, Nava V, Admassu NE, Bousheri S, Johnson T, Tomz A, Thompson J, Zhang L, Pagato S, Wehner MR, **Mathur MB**, Linos E (8/23). A social media-based public health campaign to reduce indoor tanning in high-risk populations. *AJPM Focus*, 2(3):100123.

    Contribution: Advised on methodology, statistical analysis, and interpretation of results.

42. Rooprai P, Islam N, Salameh JP, Ebrahimzadeh S, Kazi A, Frank RA, Ramsay T, **Mathur MB**, Absi M, Khalil A, Kazi S, Dawit H, Lam E, Fabiano N, McInnes MDF (8/23). Is there evidence of *p*-hacking in imaging research? *Canadian Association of Radiologists Journal*, 74(3):497-507.

    Contribution: Advised on methodology and statistical analysis, and contributed to writing.

43. **Mathur MB** & Mathur VS (5/23). Primary care physicians' perceptions of the effects of being overweight on all-cause mortality. *Epidemiology*, 34(3), e19-e20.

    - Covered by *Radio New Zealand* (audience of 250,000–300,000), *Stanford Medicine*, Stanford Magazine

44. **Mathur MB** & Fox MP (4/23). Toward open and reproducible epidemiology. *American Journal of Epidemiology,* 192(4), 658-664.

45. **Mathur MB** (4/23). The M-value: A simple sensitivity analysis for bias due to missing data in treatment effect estimates. *American Journal of Epidemiology*, 192(4), 612-620.

46. **Mathur MB** & VanderWeele TJ (4/23). New metrics for multiple testing of correlated outcomes. *Frontiers in Applied Mathematics and Statistics,* 9:1151314.

47. Chen Y, **Mathur MB**, Case BW, VanderWeele TJ (2/23). Marital transitions during earlier adulthood and subsequent health and well-being in mid- to late-life among female nurses: An outcome-wide analysis. *Global Epidemiology*, 5, 100099.

    Contribution: Advised on statistical analysis.

48. Voytenko VL, Pargament KI, Cowden RG, Lemke AW, Kurniati NMT, Bechara AO, Joynt S, Kocum M, Korkhov M, **Mathur MB**, Ho MY, VanderWeele TJ, Worthington EL (1/23). Religious coping with interpersonal hurts: Psychosocial correlates of the Brief RCOPE in four non-Western countries. *Psychology of Religion and Spirituality*, 15(1): 43–55.

    Contribution: Advised on statistical analysis and writing.

49. Fox MP, **Mathur MB**, Matthay EC (12/22). Quantifying the impact of bias to inform quality assessments in systematic reviews: The case of perchloroethylene and non-Hodgkin's lymphoma. *Global Epidemiology*, 4, 100090.

    Contribution: Contributed to writing and analysis.

50. Harris J, Ladak A, **Mathur MB** (11/2022). The effects of exposure to information about animal welfare reforms on animal farming opposition: a randomized experiment. *Anthrozoös*, 35(6), 773–788.

    Contribution: Advised on methodology, statistical analysis, and interpretation of results.

51. Boronowsky RD, Zhang AW, Stecher C, Presley K, **Mathur MB**, Cleveland DA, Garnett E, Wharton C, Brown D, Meier A, Wang M, Braverman I, Jay JA. (11/22). Plant-based default nudges effectively increase the sustainability of catered meals on college campuses: Three randomized controlled trials. *Frontiers in Sustainable Food Systems*, 6(100115).

    Contribution: Advised on methodology and statistical analysis, and contributed to writing.

52. **Mathur MB**, Smith LH, Yoshida K, Ding P, VanderWeele TJ (8/2022). E-values for effect heterogeneity and approximations for causal interaction. *International Journal of Epidemiology*, 51(4), 1268–1275.

53. Thielmann M, Lemp JM, Winkler V, Manne-Goehler J, Marcus M, Probst C, Lopez-Arboleda WA, Ebert C, Bommer C, **Mathur MB**, Andall-Brereton G, Bahendeka SK, Bovet P, Farzadfar F, Ghasemi E, Mayige MT, Moghaddam SS, Mwangi KJ, Naderimagham S, Sturua L, et al. (8/2022). Patterns of tobacco use in low- and middle-income countries by tobacco product and sociodemographic characteristics: a study of nationally representative survey data from 82 countries. *BMJ*, 378:e067582.

    Contribution: Advised on methodology and statistical analysis.

54. Maier M, VanderWeele TJ, **Mathur MB** (7/22). Using selection models to assess sensitivity to publication bias: A tutorial and call for more routine use. *Campbell Systematic Reviews*, 2022;18:e1256.

    Contribution: Conceived and guided project as senior author.

55. Grundy EAC, Slattery P, Saeri AK, Watkins K, Houlden T, Farr N, Askin H, Lee J, Mintoft-Jones A, Cyna S, Dziegielewski A, Gelber R, Rowe A, **Mathur MB**, Timmons S, Zhao K, Wilks M, Peacock JR, Harris J, Rosenfelt DL, et al. (7/2022). Interventions that influence animal-product consumption: A meta-review. *Future Foods*, 100111.

    Contribution: Advised on methodology and statistical analysis, and contributed to writing.

56. **Mathur MB** & VanderWeele TJ (4/2022). Methods to address confounding and other biases in meta-analyses: Review and recommendations. *Annual Review of Public Health*, 43:19–35.

57. **Mathur MB** & VanderWeele TJ (3/22). Assessing uncontrolled confounding in associations of being overweight with all-cause mortality. *JAMA Network Open*, 5(3), e222614.

58. Lewis M, **Mathur MB**, VanderWeele TJ, Frank MC (2/2022). The puzzling relationship between multi-lab replications and meta-analyses of the published literature. *Royal Society Open Science*, 9, 211499.

    Contribution: Contributed to methodology, statistical analysis, and writing.

59. **Mathur MB**, Peacock JR, Robinson TN, Gardner CD (12/2021). Effectiveness of a theory-informed documentary to reduce consumption of meat and animal products: Three randomized controlled experiments. *Nutrients*, 13(12):4555.

60. Errington TM, **Mathur MB**, Soderberg CK, Denis A, Perfito N, Iorns E, Nosek BA. (12/2021). Investigating the replicability of preclinical cancer biology. *eLife*, 2021;10:e71601.

    Contribution: Contributed to design and conduct of statistical analyses and to writing.

    - Covered by *Science Magazine*, *New Scientist*, *Wired*, *FOX News*, *New York Post*, etc.

61. **Mathur MB** & VanderWeele TJ (11/2021). Meta-regression methods to characterize evidence strength using meaningful-effect percentages conditional on study characteristics. *Research Synthesis Methods*, 12(6): 731-749.

62. Zhang GC, Chen JL, Luo Y, **Mathur MB**, Anagnostis P, Nurmatov U, Talibov M, Zhang J, Hawrylowicz CM, Lumsden MA, Critchley H, Sheikh A, Lundback B, Lasser C, Kankaanranta H, Lee SH, Nwaru BI. (8/2021). Menopausal hormone therapy and women's health: An umbrella review. *PLOS Medicine*, 18(8): e1003731.

    Contribution: Oversaw statistical analysis and contributed to conducting them.

63. Smith LH, **Mathur MB**, VanderWeele TJ (7/2021). Multiple-bias sensitivity analysis using bounds. *Epidemiology*, 32(5): 625-634.

    Contribution: Contributed to conceptualization and writing.

64. **Mathur MB**, Peacock J, Reichling DB, Nadler J, Bain PA, Gardner CD, Robinson TN (9/2021). Interventions to reduce meat consumption by appealing to animal welfare: Meta-analysis and evidence-based recommendations. *Appetite*, 164(105277).

- Discussed in United Nations Environmental Program report
- Covered by *AP News*, *San Francisco Chronicle*, *ABC News*, *US News & World Report*, *The Independent*, *Psychology Today*, *Yahoo! News*, etc.

65. **Mathur MB** & VanderWeele TJ (3/2021). Estimating publication bias in meta-analyses: A meta-meta-analysis across disciplines and journal tiers. *Research Synthesis Methods*, 12(2): 176-191.

66. Lo RM, Purington N, McGhee SA, **Mathur MB**, Shaw GM, Schroeder AR (1/2021). Infant allergy testing and food allergy diagnoses before and after guidelines for early peanut introduction. *Journal of Allergy and Clinical Immunology: In Practice*, 9(1): 302-310.e9.

    Contribution: Oversaw statistical analyses.

67. Fu R, Sekercioglu N, **Mathur MB**, Couban R, Coyte PC. (1/2021). Dialysis initiation and all-cause mortality among incident adult patients with advanced chronic kidney disease: A meta-analysis with bias analysis. *Kidney Medicine*, 3(1), 64-75.

    Contribution: Oversaw and conducted statistical analyses.

68. **Mathur MB**, Bart-Plange DJ, Aczel B, Bernstein MH, Ciunci A, Ebersole CR, Falcao F, Ashbaugh K, Hilliard RA, Jern A, Kellier DJ, Kessinger G, Kolb VS, Kovacs M, Lage CA, Langford EV, Lins S, Manfredi D, Meyet V, Moore DA, et al. (11/2020). Many Labs 5: Registered multisite replication of tempting-fate effects in Risen & Gilovich. *Advances in Methods and Practices in Psychological Science*, 3(3):394-404.

69. Ebersole CA, **Mathur MB**, Baranski E, Bart-Pange DJ, Buttrick NR, Chartier CR, Corker KS, Corley M, Hartshorne JK, Ijzerman H, Lazarevic LB, Rabagliati H, Ropovik I, Aczel B, Aeschbach LF, Andrighetto L, Arnal JD, Arrow H, Babincak P, Bakos BE, et al. (11/2020). Many Labs 5: Testing pre-data collection peer review as an intervention to increase replicability. *Advances in Methods and Practices in Psychological Science*, 3(3):309-331.

    Contribution: Co-led statistical analyses and led design and conduct of one of the multisite replications.

70. VanderWeele TJ, Martin J, **Mathur MB** (11/2020). E-values and incidence density sampling. *Epidemiology*, 31(6), e51-52.

    Contribution: Contributed to conceptualization and writing.

71. Zhang X, Stamey JD, **Mathur MB** (10/2020). Assessing the impact of unmeasured confounders for credible and reliable real-world evidence. *Pharmacoepidemiology and Drug Safety*, 29:1219–1227.

    Contribution: Contributed to conceptualization and co-wrote manuscript as senior author.

72. VanderWeele TJ, **Mathur MB**, & Chen Y (9/2020). Rejoinder: The future of outcome-wide studies. *Statistical Science*, 35(3), 479-483. [Invited commentary]

    Contribution: Contributed to conceptualization and writing.

73. **Mathur MB** & VanderWeele TJ (7/2020). Sensitivity analysis for publication bias in meta-analyses. *Journal of the Royal Statistical Society: Series C*, 69(5):1091-1119.

    - Selected as one of best 15 posters, Metascience Symposium 2019 (Stanford, CA)

74. VanderWeele TJ, **Mathur MB**, Chen Y (9/2020). Outcome-wide longitudinal studies: A new template for empirical studies. *Statistical Science*, 35:437-466.

    Contribution: Conducted statistical analyses, wrote publicly available R code, and contributed to writing.

75. **Mathur MB** & VanderWeele TJ (5/2020). New statistical metrics for multisite replication projects. *Journal of the Royal Statistical Society: Series A*, 183(3):1145-1166.

76. **Mathur MB** & VanderWeele TJ (5/2020). Robust metrics and sensitivity analyses for meta-analyses of heterogeneous effects. *Epidemiology*, 31(3):356-358.

77. Ling A, Montez-Rath MR, **Mathur MB**, Kapphahn K, Desai M. (5/2020). How to apply multiple imputation in propensity score matching with partially observed confounders: A simulation study and practical recommendations. *Journal of Modern Applied Statistical Methods*, 19(1): eP3439.

    Contribution: Advised on simulation study design and contributed to writing.

78. Linden A, **Mathur MB**, & VanderWeele TJ (3/2020). Conducting sensitivity analysis for unmeasured confounding in observational studies using E-values: The evalue package. *The Stata Journal*, 20(1): 162-175.

    Contribution: Contributed to design of software and to writing.

79. **Mathur MB** & VanderWeele TJ (2/2020). A simple, interpretable conversion from Pearson's correlation to Cohen's d for continuous exposures. *Epidemiology*, 31(2):e16-e18.

80. **Mathur MB**, Robinson TN, Reichling DB, Gardner CD, Nadler JN, Bain PA, Peacock J. (1/2020). Reducing meat consumption by appealing to animal welfare: Protocol for a systematic review and meta-analysis. *Systematic Reviews*, 9(3).

81. **Mathur MB**, Reichling DB, Lunardini F, Geminiani A, Antonietti A, Ruijten PAM, Levitan CA, Nave G, Manfredi D, Bessette-Symons B, Szuts A, Aczel B. (2/2020). Uncanny but not confusing: Multisite study of perceptual category confusion in the Uncanny Valley. *Computers in Human Behavior*, 103, 21-30.

82. VanderWeele TJ, Ding P, **Mathur MB** (9/2019). Technical considerations in the use of the E-value. *Journal of Causal Inference*, 7(2).

    Contribution: Contributed to conceptualization and writing.

83. **Mathur MB** & VanderWeele TJ (7/2019). Finding common ground in meta-analysis "wars" on violent video games. *Perspectives on Psychological Science*, 14(4), 705-708.

    - Covered by *The New York Times*, *CNN*, *PCMag*, *Association for Psychological Science*, *Politifact*, *CapeTalk* radio, etc.

84. **Mathur MB** & Reichling DB (6/2019). Open-source software for mouse-tracking in Qualtrics to measure category competition. *Behavior Research Methods*, 51(5), 1987-1997.

85. Desai M, Montez-Rath M, Kapphahn K, Joyce V, **Mathur MB**, Garcia A, Purington N, Owens DK (6/2019). Missing data strategies for time-varying confounders in comparative effectiveness studies of non-missing time-varying exposures and right-censored outcomes. *Statistics in Medicine*, 38(17), 3204-3220.

    Contribution: Derived theoretical results and contributed to simulation study design and writing.

86. VanderWeele TJ & **Mathur MB** (3/2019). Some desirable properties of the Bonferroni correction: Is the Bonferroni correction really so bad? *American Journal of Epidemiology*, 188(3), 617-618.

    Contribution: Contributed to conceptualization and writing.

87. **Mathur MB** & VanderWeele TJ (1/2020). Sensitivity analysis for unmeasured confounding in meta-analyses. *Journal of the American Statistical Association*, 115(529), 163-170.

88. **Mathur MB** & VanderWeele TJ (4/2019). New metrics for meta-analyses of heterogeneous effects. *Statistics in Medicine*, 38(8), 1336-1342.

89. **Mathur MB**, Ding P, Riddell CA, VanderWeele TJ (9/2018). Website and R package for computing E-values. *Epidemiology*, 29(5), e45-e47.

90. Hardwicke TE, **Mathur MB**, MacDonald K, Nilsonne G, Banks GC, Kidwell MC, Mohr AH, Clayton E, Yoon EJ, Tessler MH, Lenne RL, Altman S, Long B, Frank MC. (8/2018). Data availability, reusability, and analytic reproducibility: Evaluating the impact of a mandatory open data policy at the journal *Cognition*. *Royal Society Open Science*, 5, 180448.

    Contribution: Co-led design and statistical analyses, contributed to data collection, and contributed to writing.

91. Afghahi A, Purington N, Han S, Desai M, Pierson E, **Mathur MB**, Seto T, Thompson CA, Rigdon J, Telli ML, Badve SS, Curtis CN, West RB, Horst K, Gomez SL, Ford JM, Sledge GW, Kurian SW. (6/2018). Higher absolute lymphocyte counts predict lower mortality from early-stage triple-negative breast cancer. *Clinical Cancer Research*, 24(12), 2851-2858.

    Contribution: Contributed to design and conduct of statistical analyses and contributed to writing.

92. Boehm JK, Chen Y, Koga H, **Mathur MB**, Vie LL, & Kubzansky LD (4/2018). Is optimism associated with healthier cardiovascular-related behavior? Meta-analyses of three health behaviors. *Circulation Research*, 122(8), 1119-1134.

    Contribution: Advised on design and statistical analyses, performed sensitivity analyses, and contributed to writing.

93. **Mathur MB** & VanderWeele TJ (1/2018). R function for additive interaction measures. *Epidemiology*, 29(1), e5-e6.

94. Mummah S, Robinson TN, **Mathur MB**, Farzinkhou S, Sutton S, Gardner CD (9/2017). Effect of a mobile app intervention on vegetable consumption in overweight adults: a randomized controlled trial. *International Journal of Behavioral Nutrition and Physical Activity*, 14(1), 125-135.

    Contribution: Contributed to design of intervention, advised on statistical analyses, and contributed to writing.

95. Montez-Rath ME, Kapphahn K, **Mathur MB**, Mitani AA, Hendry DJ, Desai M (5/2017). Guidelines for generating right-censored outcomes from a Cox model extended to accommodate time-varying covariates. *Journal of Modern Applied Statistical Methods*, 16(1), 86-106.

    Contribution: Contributed to simulation study design and to writing.

96. **Mathur MB**, Gould M, Khazeni N (10/2016). Direct-to-consumer drug advertisements can paradoxically increase intentions to adopt lifestyle changes. *Frontiers in Psychology*, 7(1533).

97. Charytan DM, Desai M, **Mathur MB**, Stern NM, Brooks MM, Krzych LJ, Schuler GC, Kaehler J, Rodriguez-Granillo AM, Hueb W, Reeves BC, Thiele H, Rodriguez AE, Buszman PP, Puszman PE, Maurer R, Winkelmayer WC. (8/2016). Coronary artery bypass grafting compared with percutaneous coronary intervention in chronic kidney disease: an individual patient meta-analysis of randomized trials. *Kidney International*, 90(2), 411-421.

    Contribution: Co-led and co-conducted statistical analyses.

98. Afghahi A†, **Mathur MB**†, Thompson C, Mitani A, Rigdon J, Desai M, Yu PP, de Bruin MA, Seto T, Olson C, Kenkare P, Gomez SL, Das AK, Luft HS, Sledge GW, Sing AP, Kurian AW. (6/2016). Use and impact of gene expression profiling in early-stage breast cancer: a study of linked electronic medical record, cancer registry and genomic data across two healthcare systems. *Journal of Oncology Practice*, 12(6), e697-e709.
    †: Joint first authors

    Contribution: Co-led and co-conducted statistical analyses; contributed to writing.

99. Mummah S, **Mathur MB**, King AC, Gardner CD, Sutton S (5/2016). Mobile technology for vegetable consumption: a randomized controlled pilot study in overweight adults. *Journal of Medical Internet Research: mHealth and uHealth*, 4(2), e51.

Contribution: Co-led and co-conducted statistical analyses, contributed to design of intervention, and contributed to writing.

100. Low YS, Daugherty AC, Schroeder EA, Chen W, Seto T, Weber S, Lim M, Hastie T, **Mathur MB**, Desai M, Farrington C, Radin AA, Sirota M, Kenkare P, Thompson CA, Yu PP, Gomez SL, Sledge GW, Kurian AW, Shah NH (5/2016). Synergistic drug combinations from electronic health records and gene expression. *Journal of the American Medical Informatics Association*, 24 (3), 565-576.
Contribution: Advised on statistical analyses.

101. **Mathur MB**, Epel E, Kind S, Desai M, Parks CG, Sandler DP, Khazeni N. (5/2016a). Perceived stress and telomere length: A systematic review, meta-analysis, and methodologic considerations for advancing the field. *Brain, Behavior, and Immunity*, 56(413), 158-169.
    - Covered by *Vox*, etc.

102. **Mathur MB** & Reichling DB (1/2016). Navigating a social world with robot partners: A quantitative cartography of the Uncanny Valley. *Cognition*, 146, 22-32.
    - Selected as Editors' Choice by *Science Magazine*, 350(6260)
    - *Cognition*'s most cited article published since 2016 (as of September 2019)
    - Covered by *Slate*, *The Guardian*, *Discover*, *Psychology Today*, *New York Magazine*, *New Scientist*, *Rolling Stone*, etc.

103. Pargaonkar VS, Perez MV, Jindal A, **Mathur MB**, Myers J, Froelicher VF. (11/2015). Long-term prognosis of early repolarization with J-wave and QRS slur patterns on the resting electrocardiogram: a cohort study. *Annals of Internal Medicine*, 163(10), 747-755.
Contribution: Conducted secondary statistical analyses.

104. Pless E, Queirolo J, Pinter-Wollman N, Crow S, Allen K, **Mathur MB**, Gordon DM (11/2015). Interactions increase forager availability and activity in harvester ants. *PLOS ONE*, 10(11), e0141971.
Contribution: Advised on statistical analyses.

105. Open Science Collaboration, including **Mathur MB** (8/2015). Estimating the reproducibility of psychological science. *Science*, 349(6251), aac4716. DOI: 10.1126/science.aac4716
Contribution: Led design, conduct, and analysis of one of the replication studies.
    - Runner-up for Breakthrough of the Year, *Science Magazine*
    - Top 100 Stories of the Year, *Discover Magazine*
    - Top Science Stories of the Year, *Nature Magazine*
    - #5 in Altmetric100

106. **Mathur MB**†, Patel RB†, Gould M, Uyeki TM, Bhattacharya J, Xiao Y, Gillapsie Y, Chae C, Khazeni N. (9/2014). Seasonal patterns in human (A) H5N1 virus infection: analysis of global cases. *PLOS ONE*, 9(9), e106171.
†: Joint first authors

107. De Jesus Perez VA, Yuan K, Lyuksyutova MA, Dewey F, Orcholski ME, Shuffle EM, **Mathur MB**, Yancy Jr. L, Rojas V, Li CG, Cao A, Alastalo T-P, Khazeni N, Cimprich KA, Butte AJ, Ashley E, Zamanian RT (5/2014). Whole exome sequencing reveals TopBP1 as a novel gene in idiopathic pulmonary arterial hypertension. *American Journal of Respiratory and Critical Care Medicine*, 189(10), 1260-1272.
Contribution: Advised on statistical analyses.

108. Patel RB†, **Mathur MB**†, Gould M, Uyeki TM, Bhattacharya J, Xiao Y, Khazeni N (3/2014). Demographic and clinical predictors of mortality from highly pathogenic avian influenza A (H5N1) virus infection: CART analysis of international cases. *PLOS ONE*, 9(3), e91630.
†: Joint first authors
Contribution: Led and conducted statistical analyses, co-led design and manuscript writing, and contributed to data collection.

109. **Mathur MB**, Mathur VS, Reichling DB (1/2010). Participation in the decision to become vaccinated against human papillomavirus by California high school girls and the predictors of vaccine status. *Journal of Pediatric Health Care*, 24(1), 14-24.

    - Covered in the *Centers for Disease Control Newsletter*

PEER-REVIEWED PUBLICATIONS – Commentaries and Editorials

110. **Mathur MB** & Shpitser I (accepted 2/24). Mathur and Shpitser respond to "The evolution of selection bias in the recent epidemiologic literature – a selective overview". *American Journal of Epidemiology,* 194(1), 585-586.

111. **Mathur MB**, Covington C, VanderWeele TJ (accepted 12/22). Variation across analysts in statistical significance, yet consistently small effect sizes. *Proceedings of the National Academy of Sciences,* 120(3):e2218957120.

112. **Mathur MB** & VanderWeele TJ (10/2022). The authors respond: Effects of being overweight on mortality are unclear given multiple methodological problems. *Epidemiology*, 33(6):e22-e23.

113. **Mathur MB** (3/2022). Ethical drawbacks of sustainable meat choices. *Science*, 375(6587):1362.

    - Discussed in United Nations Environmental Program report

114. **Mathur MB** & VanderWeele TJ (2/2022). How to report E-values for meta-analyses: Recommended improvements and additions to the new GRADE approach. *Environment International*, 160, 107032.

115. **Mathur MB** & VanderWeele TJ (11/2020). Controversy and debate on credibility ceilings. Paper 3: Errors in the statistical justification for the "credibility ceiling" remain uncorrected. *Journal of Clinical Epidemiology*, 127, 214-216.

116. **Mathur MB** & VanderWeele TJ (11/2020). Controversy and debate on credibility ceilings. Paper 1: Fundamental problems with the "credibility ceiling" method for meta-analyses. *Journal of Clinical Epidemiology*, 127, 208-210.

117. VanderWeele TJ & **Mathur MB** (8/2020). Commentary: Developing best-practice guidelines for the reporting of the E-value. *International Journal of Epidemiology.*

118. **Mathur MB** & VanderWeele TJ (3/2020). Evidence relating health care provider burnout and quality of care. *Annals of Internal Medicine*, 172(6).

119. **Mathur MB** & VanderWeele TJ. (12/2019). Discussion on the meeting on "Signs and sizes: understanding and replicating statistical findings". *Journal of the Royal Statistical Society: Series A*, 183(5), 449-469.

120. **Mathur MB** & VanderWeele TJ (10/2019). Challenges and suggestions for defining replication "success" when effects may be heterogeneous: Comment on Hedges & Schauer (2019). *Psychological Methods*, 24(5), 571-575.

121. VanderWeele TJ, **Mathur MB**, Chen Y (5/2019). Media portrayals and public health: Effects on suicide and other behaviors. *JAMA Psychiatry*, 76(9):891-892.
Contribution: Led and conducted statistical analyses and contributed to writing.

122. VanderWeele TJ, **Mathur MB**, Ding P (1/2019). Correcting misinterpretations of the E-value. *Annals of Internal Medicine*, 170(2), 131–132.
    Contribution: Contributed to conceptualization and writing.
123. **Mathur MB**, Epel E, Kind S, Desai M, Parks CG, Sandler, DP, Khazeni N (8/2016b). Toward a mechanistic understanding of psychosocial factors in telomere degradation. *Brain, Behavior, and Immunity*, 56, 413.