

**MAYA B. MATHUR, PhD**

Assistant Professor  
Quantitative Sciences Unit  
Stanford University  
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**RESEARCH INTERESTS – Statistics**

Evidence synthesis, reproducibility, missing data, causal inference, epidemiology

**RESEARCH INTERESTS – Substantive**

Psychosocial and behavioral correlates of health, evidence-based behavior interventions, human-technology interaction, experimental cognitive sciences

**PRIMARY ACADEMIC POSITIONS**

4/2020 - present	<b>Assistant Professor</b> Quantitative Sciences Unit Stanford University
10/2019 - 3/2020	<b>Instructor</b> Quantitative Sciences Unit Stanford University
9/2018 - 8/2019	<b>Postdoctoral fellow</b> Department of Epidemiology Harvard University Advisor: Dr. Tyler VanderWeele

**OTHER ACADEMIC POSITIONS**

7/2020 - present	<b>Associate Director</b> Stanford Data Sciences Institute's Center for Open and Reproducible Science (DSI-CORES) Stanford University
4/2019 - present	<b>Affiliate</b> Human Flourishing Program Harvard University

**EDUCATION**

9/2015 - 8/2018	<b>PhD Biostatistics</b> Harvard University Advisor: Dr. Tyler VanderWeele Dissertation: "Statistical methods for evidence synthesis"
11/2011 - 6/2013	<b>MS Statistics</b> Stanford University (Graduation with Distinction)



## TEACHING

- 2021 (planned) **University of Bologna**  
Co-instructor for short course on methods for meta-analysis with causal inference
- 2021 (planned) **Joint Statistical Meetings**  
Co-instructor for short course:  
“Unmeasured confounding in real-world data analysis: strategies and analytics for sensitivity analyses”
- 2021 (planned) **Harvard University**  
Guest lecturer for one lecture meta-analysis PhD-level course:  
“Quantitative methods for the population health sciences”
- 2020 (planned) **Society for Epidemiologic Research Meeting**  
Co-instructor for 4-hour educational symposium:  
“E-values, unmeasured confounding, measurement error, and selection bias”
- Fall 2020 **Harvard University**  
Guest lecturer for five lectures on mediation, interaction, and replication for PhD-level course:  
“Quantitative methods for the population health sciences”
- 2020-present **Stanford University**  
Pre-award statistical office hours and mock grant review for medical fellows and postdocs preparing for internal grants
- Spring 2017-19 **Harvard University**  
TA for PhD-level course: “Quantitative methods in population health sciences”  
Distinction in Teaching Award (2017)
- Summer 2014 **Stanford University**  
Biostatistics mentor for “Intensive Course for Clinical Research” for clinical investigators
- 2013 - 2019 **Stanford University, Harvard University**  
Directed work of undergraduate and graduate research assistants on multiple research projects
- Spring 2012 **Stanford University**  
TA for “Introduction to Statistical Methods (Precalculus)” for undergraduates  
Excellence in Undergraduate Teaching Award

## MENTORING AND ADVISING

### Research assistants

- 2019-present Maximilian Maier (Masters’ student, University of Amsterdam)  
Student first author

### Other mentees

2020-present	Pascal Geldsetzer (Assistant Professor, Stanford) Methods advisor via Stanford KL2 Mentored Career Development Program for junior faculty who are preparing K proposals
2020-present	Lisa Bruckert (Postdoctoral research fellow, Stanford) Post-award mentorship for an project funded by an internal grant for Stanford postdoctoral fellows

### PROFESSIONAL SERVICE – Peer Reviewing

Ad hoc reviewer for: *American Journal of Epidemiology* (×2), *Annals of Applied Statistics*, *Annals of Internal Medicine* (×2), *Biological Psychiatry*, *Biostatistics*, *BMJ* (×2), *Epidemiology* (×2), *European Journal of Epidemiology*, *Journal of Internal Medicine*, *Journal of Psychology & Psychotherapy*, *International Journal of Human-Computer Studies* (×2), *Liver International* (×2), *Medical Decision-Making*, *Meta-Psychology* (×2), *Molecular Carcinogenesis* (×2), *Nature Human Behavior*, *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 Methods* (×3), *Psychological Science*, *Psychoneuroendocrinology* (×3), *Research Synthesis Methods*, *Royal Society Open Science* (×6), and *Systematic Reviews* (×2)

### PROFESSIONAL SERVICE – Other

2018	<b>Animal Help Now</b> (national wildlife emergency response system) Statistical advisor (volunteer)
2016-present	<b>Center for Open Science</b> Ambassador

### RESEARCH AND TRAVEL GRANTS

#### Ongoing support

12/2020 - 11/2021	<b>Food Systems Research Fund</b> “Development and validation of a simple educational intervention to encourage plant-based eating” (PI: <b>Maya Mathur</b> )
9/2019 - 8/2021	<b>Pershing Square Fund for Research on the Foundations of Human Behavior</b> “Psychologically-informed appeals to reduce meat consumption: Meta-analysis, theoretical review, and intervention development” (PI: <b>Maya Mathur</b> )
1/2021 - 12/2022	<b>National Institutes of Health</b> “Theory and methods for mediation and interaction” (PI: Tyler VanderWeele) Role: Biostatistician, 10% FTE (2021 - 2022)

#### Completed support

12/2019 - 8/2020	<b>John E. Fetzer Memorial Trust</b> “Sensitivity analysis for publication bias in meta-analyses: Development of novel statistical methods and results in meta-analyses across disciplines” (PI: <b>Maya Mathur</b> )
3/2017 - 8/2019	<b>Harvard University Mind, Brain, &amp; Behavior Program</b>

	Graduate Student Award “Uncanny but not confusing: Multisite study of perceptual category confusion in the Uncanny Valley” Lead investigator
9/2015 - 8/2018	<b>United States Department of Defense</b> National Defense Science & Engineering Graduate Fellowship Full support and stipend for PhD studies
4/2017	<b>Harvard University Mind, Brain, &amp; Behavior Program</b> Graduate Student Award For psychology conference attendance
8/2012 - 9/2013	<b>Stanford University</b> Undergraduate Research Grant “Spatiotemporal dynamics and a prognostic model of healthcare utilization following 2009 (H1N1) pandemic in New York state” Lead investigator
10/2012	<b>Stanford University</b> Undergraduate Conference Grant For medical conference attendance
6/2011 - 8/2011	<b>Stanford University</b> Psych-Summer Research Grant “Using a head-mounted camera to investigate social referencing during naturalistic word learning” Undergraduate research assistant

## STATISTICAL SOFTWARE DEVELOPED

1. R package **regmedint**  
Conducts regression-based causal mediation analysis.  
Contributors: Yoshida K & **Mathur MB**.
2. R package **PublicationBias**  
Conducts sensitivity analyses for publication bias in meta-analyses.  
Contributors: **Mathur MB**, Wang R, & VanderWeele TJ.
3. 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.
4. Stata module **EVALUE**  
Conducts sensitivity analyses for unmeasured confounding in observational studies.  
Contributors: Linden A, **Mathur MB**, VanderWeele TJ.
5. R package **NRejections**  
Computes metrics of outcome-wide evidence strength for studies testing multiple correlated outcomes.

Contributors: **Mathur MB** & VanderWeele TJ.

6. 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.

[\[Link to E-value GUI\]](#)

[\[Link to meta-analysis GUI\]](#)

7. R package **Replicate**

Conducts statistical analyses for multisite replication projects.

Contributors: **Mathur MB** & VanderWeele TJ.

8. 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.

## ORGANIZED CONFERENCE SESSIONS

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

## PRESENTATIONS AND SEMINARS – Keynote Talks

2021 (planned) Massachusetts Psychiatric Society Annual Psychopharmacology Update Conference (Waltham, MA)

## PRESENTATIONS AND SEMINARS – Invited

2021 (planned) 8<sup>th</sup> Annual Nordic-Baltic Biometric Conference (Helsinki, Finland)  
TBD (on statistical significance in medical decision-making)

2020 Yale University (New Haven, CT)  
Veteran’s Aging Cohort Study, Statistics Working Group (webinar)  
“An introduction to causal mediation analysis”

2020 Joint Statistical Meetings (virtual)  
Invited discussant for session: “Unsupervised learning with latent variables for biobehavioral research”

2020 Joint Statistical Meetings (virtual)  
“The E-value: Sensitivity analyses for unmeasured confounding and extensions to meta-analysis”

2020 Compassion in World Farming (Godalming, UK)  
Research Lunch Series (webinar)  
“Reducing meat consumption by appealing to animal welfare: Meta-analysis and evidence-based recommendations”

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

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 12<sup>th</sup> 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 (webinar)  
“Sensitivity analyses for unmeasured confounding in studies and meta-analyses”
- 2019 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”
- 2019 University of Alabama at Birmingham (Birmingham, AL)  
Biostatistics Seminar  
“Sensitivity analysis for unmeasured confounding in studies and meta-analyses”
- 2018 Joint Statistical Meetings (Vancouver, BC)  
“The E-value: Sensitivity analysis, software, and implementation”
- 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”  
[\[Link to presentation\]](#)
- 2008 American Public Health Association National Meeting (San Diego, CA)  
“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”

## PRESENTATIONS AND SEMINARS – Other

- 2019 Berkeley Institute for Transparency in the Social Sciences Annual Meeting (Berkeley, CA)  
“Sensitivity analysis for publication bias in meta-analyses”  
[\[Link to presentation\]](#)

- 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”  
[\[Link to video\]](#)



## PEER-REVIEWED PUBLICATIONS – Original Research

★: Describes contribution to middle-authored papers.

1. **Mathur MB**, Bart-Plange DJ, Aczel B, Bernstein MH, Ciunci A, Ebersole CR, 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.
2. Ebersole, CA, **Mathur MB**, Chartier CA, Hartshorne JK, Ijzerman H, Ropovik I, 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.  
★: Co-led statistical analyses and led design and conduct of one of the multisite replications.
3. **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. [Commentary]
4. **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. [Commentary]
5. 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*, 29:12191227.
6. VanderWeele TJ, **Mathur MB**, & Chen Y (9/2020). Rejoinder: The future of outcome-wide studies. *Statistical Science*, 35(3), 479-483. [Invited commentary]
7. **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)
8. VanderWeele TJ, **Mathur MB**, Chen Y (9/2020). Outcome-wide longitudinal studies: A new template for empirical studies. *Statistical Science*, 35:437-466.  
★: Conducted statistical analyses, wrote publicly available R code, and contributed to writing.
9. **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.
10. **Mathur MB** & VanderWeele TJ (5/2020). Robust metrics and sensitivity analyses for meta-analyses of heterogeneous effects. *Epidemiology*, 31(3).
11. Linden A, **Mathur MB**, & VanderWeele TJ (3/2020). Conducting sensitivity analysis for unmeasured confounding in observational studies using E-values: The evalua package. *The Stata Journal*, 20(1).  
★: Contributed to design of software and to writing.
12. **Mathur MB** & VanderWeele TJ (2/2020). A simple, interpretable conversion from Pearson’s correlation to Cohen’s  $d$  for continuous exposures. *Epidemiology*, 31(2).
13. **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).
14. **Mathur MB**, Reichling DB, Lunardini F, Geminiani A, Antonietti A, Ruijten PAM, et al. (9/2019). Uncanny but not confusing: Multisite study of perceptual category confusion in the Uncanny Valley. *Computers in Human Behavior*, 103, 21-30.
15. VanderWeele TJ, Ding P, **Mathur MB** (9/2019). Technical considerations in the use of the E-value. *Journal of Causal Inference*, 7(2).  
★: Contributed to conceptualization and writing.

16. **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.
17. **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.
18. Desai M, Montez-Rath M, Kapphahn K, Joyce V, **Mathur MB**, Garcia A, et al (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.
 

\*: Derived theoretical results and contributed to simulation study design and writing.
19. **Mathur MB** & VanderWeele TJ (1/2020). Sensitivity analysis for unmeasured confounding in meta-analyses. *Journal of the American Statistical Association*, 115(529), 163-170.
20. **Mathur MB** & VanderWeele TJ (4/2019). New metrics for meta-analyses of heterogeneous effects. *Statistics in Medicine*, 38, 1336-1342.
21. **Mathur MB**, Ding P, Riddell CA, VanderWeele TJ (9/2018). Website and R package for computing E-values. *Epidemiology*, 29(5), e45-e47. [Research letter]
22. Hardwicke TE, **Mathur MB**, MacDonald K, Nilsson G, Banks GC, Kidwell MC, et al. (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.
 

\*: Co-led design and statistical analyses, contributed to data collection, and contributed to writing.
23. Afghahi A, Purington N, Han S, Desai M, Pierson E, **Mathur MB**, et al. (6/2018). Higher absolute lymphocyte counts predict lower mortality from early-stage triple-negative breast cancer. *Clinical Cancer Research*, 24(12), 2851-2858.
 

\*: Contributed to design and conduct of statistical analyses and contributed to writing.
24. 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.
 

\*: Advised on design and statistical analyses, performed sensitivity analyses, and contributed to writing.
25. **Mathur MB** & VanderWeele TJ (1/2018). R function for additive interaction measures. *Epidemiology*, 29(1), e5-e6. [Research letter]
26. 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.
 

\*: Contributed to design of intervention, advised on statistical analyses, and contributed to writing.
27. 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.
 

\*: Contributed to simulation study design and to writing.
28. **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).

29. Charytan DM, Desai M, **Mathur MB**, Stern NM, Brooks MM, Krzych LJ, et al. (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.  
\*: Co-led and co-conducted statistical analyses.
30. Afghahi A†, **Mathur MB**†, Thompson C, Mitani A, Rigdon J, Desai M, et al. (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  
\*: Co-led and co-conducted statistical analyses; contributed to writing.
31. 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.  
\*: Co-led and co-conducted statistical analyses, contributed to design of intervention, and contributed to writing.
32. Low YS, Daugherty AC, Schroeder EA, Chen W, Seto T, Weber S, et al., including **Mathur MB** (5/2016). Synergistic drug combinations from electronic health records and gene expression. *Journal of the American Medical Informatics Association*, 24 (3), 565-576.  
\*: Advised on statistical analyses.
33. **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.
34. **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.
35. 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.  
\*: Conducted secondary statistical analyses.
36. 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.  
\*: Advised on statistical analyses.
37. Open Science Collaboration, including **Mathur MB** (8/2015). Estimating the reproducibility of psychological science. *Science*, 349(6251), aac4716. DOI: 10.1126/science.aac4716  
\*: 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

38. **Mathur MB**<sup>†</sup>, Patel RB<sup>†</sup>, Gould M, Uyeki TM, Bhattacharya J, Xiao Y, et al. (9/2014). Seasonal patterns in human (A) H5N1 virus infection: analysis of global cases. *PLOS ONE*, 9(9), e106171.  
<sup>†</sup>: Joint first authors
39. De Jesus Perez VA, Yuan K, Lyuksyutova MA, Dewey F, Orcholski ME, Shuffle EM, et al., including **Mathur MB** (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.  
<sup>\*</sup>: Advised on statistical analyses.
40. Patel RB<sup>†</sup>, **Mathur MB**<sup>†</sup>, 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.  
<sup>†</sup>: Joint first authors  
<sup>\*</sup>: Led and conducted statistical analyses, co-led design and manuscript writing, and contributed to data collection.
41. **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

42. VanderWeele TJ & **Mathur MB** (8/2020). Commentary: Developing best-practice guidelines for the reporting of the E-value. *International Journal of Epidemiology*. [Invited commentary]
43. **Mathur MB** & VanderWeele TJ (3/2020). Evidence relating health care provider burnout and quality of care. *Annals of Internal Medicine*, 172(6). [Commentary]
44. **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. [Invited commentary]
45. **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. [Commentary]
46. VanderWeele TJ, **Mathur MB**, Chen Y (5/2019). Media portrayals and public health: Effects on suicide and other behaviors. *JAMA Psychiatry*. Epub ahead of print. DOI:10.1001/jamapsychiatry.2019.0842. [Invited editorial]  
<sup>\*</sup>: Led and conducted statistical analyses and contributed to writing.
47. 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. [Research letter]  
<sup>\*</sup>: Contributed to conceptualization and writing.
48. VanderWeele TJ, **Mathur MB**, Ding P (1/2019). Correcting misinterpretations of the E-value. *Annals of Internal Medicine*, 170, 1311-132. [Invited commentary]  
<sup>\*</sup>: Contributed to conceptualization and writing.
49. **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. [Invited commentary]

## PAPERS IN PRESS

50. **Mathur MB** & VanderWeele TJ (accepted 10/2020). Estimating publication bias in meta-analyses: A meta-meta-analysis across disciplines and journal tiers. *Research Synthesis Methods*. [\[Preprint link\]](#)
51. Ling A, Montez-Rath MR, **Mathur MB**, Kapphahn K, Desai M. (accepted 10/2020). 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*. \*: Advised on simulation study design and contributed to writing.
52. Fu R, Sekercioglu N, **Mathur MB**, Couban R, Coyte PC. (accepted 10/2020). Dialysis initiation and all-cause mortality among incident adult patients with advanced chronic kidney disease: A meta-analysis with bias analysis. *Kidney Medicine*.
53. Lo RM, Purington N, McGhee SA, **Mathur MB**, Shaw GM, Schroeder AR (accepted). Infant allergy testing and food allergy diagnoses before and after guidelines for early peanut introduction. *Journal of Allergy and Clinical Immunology: In Practice*.

## PAPERS UNDER REVIEW AND UNDER REVISION

1. **Mathur MB** & VanderWeele TJ (submitted 7/2020). Meta-regression methods to characterize evidence strength using meaningful-effect percentages conditional on study characteristics [\[Preprint link\]](#)
2. Yoshida K, **Mathur MB**, Glynn RJ (submitted 6/2020). Conducting regression-based causal mediation analysis using the R package ‘regmedint’.
3. Lewis M, **Mathur MB**, VanderWeele TJ, Frank MC (submitted 6/2020). The puzzling relationship between multi-lab replications and meta-analyses of the published literature. [\[Preprint link\]](#)
4. Tsui A, Carstensen A, Kachergis G, Abubakar A, Mulat Asnake, Barry O, et al., including **Mathur MB** (submitted 4/2020). Exploring variation in infants’ preference for infant-directed speech: Evidence from a multi-site study in Africa.
5. **Mathur MB**, Peacock J, Reichling DB, Nadler J, Bain PA, Gardner CD, Robinson TN (under revision 8/2020). Interventions to reduce meat consumption by appealing to animal welfare: Meta-analysis and evidence-based recommendations.

## PEER-REVIEWED CONFERENCE PROCEEDINGS

(Proceedings corresponding to work appearing under “Peer-Reviewed Publications” or “Papers Under Review” are omitted.)

1. Montez-Rath ME, Kapphahn K, **Mathur MB**, Purington N, Joyce V, Desai M (2017). Simulating real-world data with time-varying variables. *American Statistical Association Conference on Statistical Practice*.
2. Pargaonkar V, Kobayashi Y, Tanaka S, **Mathur MB**, Nguyen P, Lee D, Fearon W, Yeung A, Tremmel J (2015). Sex differences in coronary pathophysiology in patients with angina in the absence of obstructive coronary artery disease. *Proceedings of the American College of Cardiology 2015*.
3. Ha LD, **Mathur MB**, Pargaonkar V, Pickham D, Tremmel J, Froelicher V, Khandelwal A (2015). Sex differences in the prevalence and prognostic value of risk parameters on resting electrocardiogram. *Proceedings of the American College of Cardiology 2015*.
4. Kapphahn K, Montez-Rath M, **Mathur MB**, Desai M (2015). Feasibility of reformatting data for multiple imputation of clustered data. *Joint Statistical Meetings 2015*.

5. **Mathur M** and Reichling D (2008). A critical analysis of the efficacy of equine joint supplements. *Veterinary Orthopedic Society 35th Annual Conference Proceedings 2008: 81* and *Veterinary and Comparative Orthopaedics & Traumatology 2008*.