

CURRICULUM VITAE

Elizabeth A. Stuart

PERSONAL DATA

Department of Mental Health
Johns Hopkins Bloomberg School of Public Health
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EDUCATION AND TRAINING

- 2004 PhD Statistics, Harvard University
Advisor: Professor Donald B. Rubin
Thesis "Matching methods for estimating causal effects using multiple control groups"
- 2001 AM Statistics, Harvard University
- 1997 AB Mathematics (major) and Chemistry (minor), Smith College
- 1995-1996 Visiting Student in Mathematics and Computation, Oxford University

PROFESSIONAL EXPERIENCE

- 2011- Associate Professor
- 2006-2011 Assistant Professor
Johns Hopkins Bloomberg School of Public Health
Department of Mental Health (primary)
Department of Biostatistics (joint)
- 2004-2006 Researcher
Mathematica Policy Research, Inc.
- 2006 Adjunct Faculty
Joint Program in Survey Methodology, University of Maryland
and University of Michigan
- 2000-2004 Contractor
U.S. Bureau of the Census
- 2003-2004 Research Assistant for Professor Gary King
Department of Government, Harvard University
- 2000-2004 Teaching and Research Assistant
Department of Statistics, Harvard University
- 1997-1999 Research Assistant/Programmer
Mathematica Policy Research, Inc.

1995-1997 Research Assistant
 Department of Mathematics, Smith College

PROFESSIONAL ACTIVITIES

Society Membership and Leadership and Conference Organization

American Statistical Association, 2001-present
 Social Statistics Section Program Chair Elect, 2011
 Committee on Women in Statistics, 2007 - present
 ASA Gertrude Cox Scholarship Committee, 2006-2008
 Session Chair, Joint Statistical Meetings, 2001, 2002, 2005, 2007, 2011
 Invited Session Organizer, Joint Statistical Meetings, 2007, 2010
 Judge, Washington Statistical Society Curtis Jacobs Award, 2005
International Conference of Health Policy Statistics 2011, Organizing Committee
 Invited Session Organizer, 2011
Society for Prevention Research, 2006-present
 Member, Innovative Methods Theme Committee, 2009-2010
 Annual Meeting Program Committee, 2009
 Session Organizer, 2008
Society for Research in Educational Effectiveness, 2011 - present
 Annual Meeting Abstract Reviewer, Fall 2011
 Pre-conference workshop presenter, Fall 2011
International Biometric Society Eastern North American Region
 Spring Meeting Program Committee, 2010
American PsychoPathological Association, 2009-present
Co-organizer, Prevention Science & Methodology Group biannual meeting, 2008
Organizer, mid-Atlantic Causal Inference Workshop, 2008
American Public Health Association, 2007-present
Association for Public Policy Analysis and Management, 2004-2008
Institute of Mathematical Statistics, 2001-2008

Participation on Advisory Panels

2011-2014 Technical Work Group for the Evaluation of Race To The Top and School
 Improvement Grants
 U.S. Department of Education/Mathematica Policy Research, Inc.
2010-2013 Technical Work Group for the Evaluation of Teacher Residency Programs
 U.S. Department of Education/Mathematica Policy Research, Inc.
2010 Technical Work Group for the National Evaluation of the Individuals with
 Disabilities Education Act (IDEA) Technical Assistance and Dissemination
 Program (TA&D Program)
 U.S. Department of Education/Westat
2009-2012 ITEST Advisory Board
 U.S. Department of Education/University of South Florida
2008 Strengthening Adult Reading Instructional Practices Advisory Board
 U.S. Department of Education/Abt Associates
2007 National Head Start Impact Study Advisory Board
 U.S. Department of Health and Human Services

Consultations

2010- Abt Associates
2009- Washington University
2008- American Institutes for Research
2008 The Urban Institute
2006- University of Pennsylvania School of Medicine
2006 Mathematica Policy Research, Inc.
2004-2006 RAND Corporation
2002-2005 Genzyme Corporation
2000-2004 Active Girls Initiative

Faculty Affiliations

JHSPH Center for Prevention and Early Intervention (2006 -)
JHSPH Center for the Prevention of Youth Violence (2006 -)
Johns Hopkins University Training Program in Education Research (2009-)
JHSPH ACTIVE Evaluation, Fidelity Assessment Advisory Board (2010-)
Faculty Visitor, BEAR Program, Graduate School of Education, University of California at Berkeley (2008)
Faculty Visitor, Institute for Employment Research, Nuremberg, Germany (2011)

Data Safety Monitoring Boards (DSMB)

The Impact of Neighborhoods, Networks and Depression on Drug Users' HIV Risks (PI: Latkin; 2009-)
Columbia University Center for Homelessness Prevention Studies (PI: Caton; 2011)

EDITORIAL ACTIVITIES

Editorial Boards

2009 - Associate Editor, Journal of the Royal Statistical Society, Series A
2011 – Associate Editor, The Journal of Causal Inference

Peer Review Activities

Academy Health
American Journal of Evaluation
American Journal of Geriatric Psychiatry
American Journal of Public Health
The American Statistician
Annals of Applied Statistics
Biometrics
Biostatistics
Children and Youth Services Review
Circulation
Communications in Statistics
Computational Statistics and Data Analysis
Criminology
Developmental Psychology
Educational Psychology Review
Epidemiology
European Journal of Agricultural Economics
Health Economics
Health Services & Outcomes Research Methodology

Health Services Research
International Journal of Biostatistics
International Statistical Review
Journal of Adolescent Health
Journal of the American Medical Association
Journal of the American Statistical Association
Journal of Behavioral Health Services & Research
Journal of Clinical Epidemiology
Journal of Educational and Behavioral Statistics
Journal of Health Communication
Journal of Official Statistics
Journal of Politics
Methodology
Prevention Science
Psychological Methods
Psychology of Addictive Behavior
Review of General Psychology
Science
Sociological Methods & Research
Statistica Sinica
Statistical Science
Statistics in Medicine
Survey Methodology

Book reviewer

Oxford University Press
Sage Publications
Springer Verlag

Ad-hoc review of grant proposals

National Science Foundation
Netherlands Organisation for Health Research and Development

Grant Review Panel Member

2011-2013 Principal member, Institute of Education Sciences, U.S. Department of Education Statistics and Modeling Panel
2010 National Institute of Mental Health, Interventions Committee For Disorders Involving Children And Their Families (ITVC; ad hoc)
2010 Institute of Education Sciences, U.S. Department of Education, Early Intervention and Early Childhood Education Panel (EI/ECE; ad hoc)
2010 Institute of Education Sciences, U.S. Department of Education, Education Systems and Broad Reform Panel (ad hoc)
2009 Institute of Education Sciences, U.S. Department of Education, Reading, Writing, and Language Development Panel (ad hoc)

HONORS AND AWARDS

2010 JHSPH Golden Apple award for Excellence in Teaching
2010 JHSPH AMTRA Advising, Mentoring, and Teaching Recognition Award
2010 JHSPH Recognition for Excellence in Teaching (based on course

	reviews; for 2 courses: 140.664, 330.805)
2009	Paper recognized as “New Hot Paper” by Thomson Reuters
2008	Warren Miller Prize for best paper published in Volume 15 of <i>Political Analysis</i> . Paper also determined a “Fast Breaking Paper” by Thomson Reuters.
2007	Johns Hopkins Bloomberg School of Public Health Edward R. Brewster Faculty Innovations Fund Awardee
2007	Child Prevention, Intervention, and Services Fellow
2007	Society for Prevention Research Travel Award
2002	Harvard University Cochran Travel Award
2001	Student Paper Award
	ASA Government Statistics/Social Statistics Section/Survey Research Methods Section of the American Statistical Association
2000	American Statistical Association Gertrude Cox Scholarship
2002, 2004	Harvard University Certificate of Distinction in Teaching
1999	Harvard University William Cochran Fellowship
1999-2001	National Science Foundation Graduate Research Fellowship
1997	AB Magna cum laude, Smith College
1997	Phi Beta Kappa
1997	Smith College Pokora Prize for Senior who excels in Mathematics
1995-1997	Barry M. Goldwater Scholar
1993-1997	Robert C. Byrd Scholar

PUBLICATIONS

[* indicates order of authors alphabetical]

[** indicates student co-author]

Journal Articles (peer review)

1. Wang, Y., Green, K., Storr, C. Stuart, E.A., Clemans, K., Petras, H., and Ialongo, N.S. (in press). The Effect of Two Elementary School-based Prevention Interventions on Being Offered Tobacco and the Transition to Smoking. Forthcoming in *Drug and Alcohol Dependence*.
2. Cooley-Strickland, M., Quille, T.J., Griffin, R.S., **Stuart, E.A.**, Bradshaw, C.P., and Furr- Holden, D.M. (2011). Efectos de la Exposición de los Adolescentes a la Violencia en la Comunidad: El Proyecto MORE. (Effects of Youth’s Exposure to Community Violence: The More Project). *Psychosocial Intervention* 20(2): xx–yy.
3. Rosenberg, R.E., Landa, R.J., Law, J.K., Stuart, E.A., and Law, P.A. (2011). Factors Affecting Age at Initial Autism Spectrum Disorder Diagnosis in a National Survey. *Autism Research and Treatment* Volume 2011, Article ID 874619, 11 pages. <http://www.hindawi.com/journals/aurt/2011/874619/>.
4. *Imai, K., Jo, B., and **Stuart, E.A.** (in press). Using potential outcomes to understand causal mediation analysis: Comment on Maxwell, Cole, and Mitchell (2011). Forthcoming in *Multivariate Behavioral Research*.

5. Freedman, B.H., Kalb, L., **Zablotsky, B., and **Stuart, E.A.** (in press). Relationship Status among Parents of Children with Autism Spectrum Disorders: A Population-Based Study. Forthcoming in *Journal of Autism and Developmental Disorders*.
6. Jo, B., **Stuart, E.A.**, MacKinnon, D., and Vinokur, A.D. (in press). The use of propensity scores in mediation analysis. Forthcoming in *Multivariate Behavioral Research*.
7. **Stuart, E.A.**, and Jo, B. (in press). Assessing the sensitivity of methods for estimating principal causal effects. Forthcoming in *Statistical Methods in Medical Research*.
8. **Christensen, A.L., **Stuart, E.A.**, Perry, D.F., and Le, H-N. (in press). Unintended pregnancy and perinatal depression trajectories in low-income, high-risk Hispanic immigrants. Forthcoming in *Prevention Science*.
9. **Lee, B., Lessler, J., and **Stuart, E.A.** (2011). Weight trimming and propensity score weighting. *PLoS ONE* 6(3): e18174. PMID: PMC2807890.
10. Le, H-N., Perry, D., and **Stuart, E.A.** (2011). Randomized controlled trial of a preventive intervention for perinatal depression in high-risk Latinas. *Journal of Consulting and Clinical Psychology* 79(2): 135-141.
11. Azur, M., **Stuart, E.A.**, Frangakis, C.M., and Leaf, P.J. (in press). Multiple imputation by chained equations: What is it and how does it work? Forthcoming in *International Journal of Methods in Psychiatric Research*.
12. Werner, R., Konetzka, T., **Stuart, E.A.**, and Polsky, D. (in press). Changes in patient sorting to nursing homes under public reporting: Improved patient matching or provider gaming? Forthcoming in *Health Services Research*.
13. *Ho, D.E., Imai, K., King, G., and **Stuart, E.A.** (2011). MatchIt: Nonparametric preprocessing for parametric causal inference. *Journal of Statistical Software* 42(8): 1-28.
14. **Stuart, E.A.**, Cole, S.R., Bradshaw, C.P., and Leaf, P.J. (2011). The use of propensity scores to assess the generalizability of results from randomized trials. *The Journal of the Royal Statistical Society, Series A* 174(2): 369-386. PMC Journal – In progress.
15. Karakus, M.C., Salkever, D.S., Slade, E.P., Ialongo, N., **Stuart, E.A.** (in press). Implications of Middle School Behavior Problems for High School Graduation and Employment Outcomes of Young Adults: Estimation of a Recursive Model. Forthcoming in *Education Economics*.
16. **Kuramoto, S.J., **Stuart, E.A.**, Runeson, B., Lichtenstein, P., Langstrom, P., and Wilcox, H. (in press). Maternal versus Paternal Suicide and Offspring Risk of Hospitalization for Psychiatric Disorders and Suicide Attempt. Forthcoming in *Pediatrics*.
17. Werner, R., Polsky, D., and **Stuart, E.A.** (2010). Public Reporting Drove Quality Gains At Nursing Homes. *Health Affairs* 29(9): 1706-1713.

18. **Stuart, E.A.** and Ialongo, N.S. (2010). Matching methods for selection of subjects for follow-up. *Multivariate Behavioral Research* 45(4): 746-765. PMID NIHMS 223762.
19. Green, K.M., Doherty, E.E., **Stuart, E.A.**, and Ensminger, M.E. (2010). Does Heavy Adolescent Marijuana Lead to Criminal Involvement in Adulthood? Evidence from a Multiwave Longitudinal Study of Urban African Americans. *Drug and Alcohol Dependence* 112: 117-125.
20. Landa, R.J., Holman, K.C., O'Neill, A.H., and **Stuart, E.A.** (in press). Intervention targeting development of socially synchronous engagement in toddlers with Autism Spectrum Disorder: A randomized controlled trial. Forthcoming in *The Journal of Child Psychology and Psychiatry*.
21. Cole, S.R. and **Stuart, E.A.** (2010). Generalizing evidence from randomized clinical trials to target populations: the ACTG-320 trial. *American Journal of Epidemiology* 172: 107-115. PMID PMC2915476.
22. **Harder, V.S., **Stuart, E.A.**, and Anthony, J. (2010). Propensity Score Techniques and the Assessment of Measured Covariate Balance to Test Causal Associations in Psychological Research. *Psychological Methods* 15(3): 234-249. PMID NIHMS 192966.
23. **Stuart, E.A.** (2010). Matching Methods for Causal Inference: A review and a look forward. *Statistical Science* 25(1): 1-21. PMID NIHMS 200640.
24. **Lee, B., Lessler, J., and **Stuart, E.A.** (2009). Improving propensity score weighting using machine learning. *Statistics in Medicine* 29(3): 337-346. PMID NIHMS 153529.
25. Jo, B., and **Stuart, E.A.** (2009). On the use of propensity scores in principal causal effect estimation. *Statistics in Medicine* 28: 2857-2875. PMID PMC 2757143.
26. **Stuart, E.A.**, Marcus, S.M., Horvitz-Lennon, M.V., Gibbons, R.D., and Normand, S-L.T. (2009). Using non-experimental data to estimate treatment effects. *Psychiatric Annals* 39(7): 719-728. PMID NIHMS 94293.
27. Cooley-Strickland, M., Quille, T.J., Griffin, R.S., **Stuart, E.A.**, Bradshaw, C.P., and Furr-Holden, D.M. (2009). Community violence and youth: Affect, behavior, substance use, and academics. *Clinical Child and Family Psychology Review* 12: 127-156. PMID PMC 2700237.
28. **Stuart, E.A.**, Azur, M., Frangakis, C.E., & Leaf, P. (2009). Multiple imputation with large datasets: A case study of the Children's Mental Health Initiative. *American Journal of Epidemiology* 169(9): 1133-1139. PMID PMC 2727238.
29. Werner, R.M., Konetzka, R.T., **Stuart, E.A.**, Norton, E.C., Polsky, D., and Park, J. (2009). The impact of public reporting on quality of postacute care. *Health Services Research* 44(4): 1169-1187. PMID: 19490160.
30. **Wang, Y., Browne, D.C., Petras, H., **Stuart, E.A.**, Wagner, F.A., Lambert, S.F., Kellam, S.G., & Ialongo, N.S. (2009). Depressed Mood and the Effect of Two Universal First Grade

Preventive Interventions on Survival to the First Tobacco Cigarette Smoked Among Urban Youth. *Drug and Alcohol Dependence* 100: 194-203. PMID: 19059736.

31. Marcus, S.M., Siddique, J., Ten Have, T.R., Gibbons, R.D., **Stuart, E.A.**, and Normand, S-L.T. (2008). Balancing treatment comparisons in longitudinal studies. *Psychiatric Annals* 38(12): 805-811. PMCID: PMC2722117.
32. **Stuart, E.A.** and Rubin, D.B. (2008). Matching with multiple control groups and adjusting for group differences. *Journal of Educational and Behavioral Statistics* 33(3): 279-306. doi:10.3102/1076998607306078.
33. **Stuart, E.A.**, Perry, D.F., Le, H-N., & Ialongo, N.S. (2008). Estimating intervention effects of prevention programs: Accounting for noncompliance. *Prevention Science* 9(4): 288-298. PMCID NIHMS 222427.
34. **Harder, V.S., **Stuart, E.A.**, & Anthony, J. (2008). Adolescent cannabis problems and young adult depression: Male-female stratified propensity score analyses. *American Journal of Epidemiology* 168: 592-601. PMCID: PMC2727198.
35. Miech, R., Azur, M., **Patterson, T., **Jowers, K., Goldstein, A.B., **Stuart, E.A.**, Walrath, C., and Leaf, P.J. (2008). The potential to reduce mental health disparities through the Comprehensive Community Mental Health Services for Children and Their Families Program. *The Journal of Behavioral Health Services & Research* 35(3): 253-264.
36. Crum, R.M., Green, K.M., Storr, C.L., Chan, Y-F., Ialongo, N., **Stuart, E.A.**, and Anthony, J.C. (2008). Depressed mood in childhood and subsequent alcohol use through adolescence and young adulthood. *Archives of General Psychiatry* 65(6): 702-712.
37. Salkever, D.S., Johnston, S., Karakus, M.C., Ialongo, N.S., Slade, E.P., and **Stuart, E.A.** (2008). Enhancing the Net Benefits of Disseminating Efficacious Prevention Programs: A Note on Target Efficiency with Illustrative Examples. *Administration and Policy in Mental Health and Mental Health Services Research*. DOI 10.1007/s10488-008-0168-9.
38. Slade, E.P., **Stuart, E.A.**, Salkever, D.S., Karakus, M., Green, K.M., and Ialongo, N. (2008). Impacts of age of onset of substance use disorders on risk of adult incarceration among disadvantaged urban youth: A propensity score matching approach. *Drug and Alcohol Dependence* 95: 1-13.
39. **Stuart, E.A.** and Green, K.M. (2008). Using full matching to estimate causal effects in non-experimental studies: Examining the relationship between adolescent marijuana use and adult outcomes. *Developmental Psychology* 44(2): 395-406.
40. *Imai, K., King, G., and **Stuart, E.A.** (2008). Misunderstandings between experimentalists and observationalists about causal inference. *Journal of the Royal Statistical Society, Series A* 171: 481-502.

On All-Time Top 10 list of downloads, Social Science Research Network, Quantitative Methods: Econometrics, Polimetrics, and Statistics Section (as of April 15, 2008).

Recognized as a “New Hot Paper in Economics and Business” by Thomson Reuters for being among the most cited in those fields.

<http://sciencewatch.com/dr/nhp/2009/09julnhp/09julnhpImaiET/>.

As of June 26, 2010, most cited paper published in JRSS-A in 2007-2008.

41. McConnell, S., **Stuart, E.A.**, and Devaney, B. (2008). The truncation-by-death problem: What to do in an experimental evaluation when the outcome is not always defined. *Evaluation Review* 32(2): 157-186.
42. **Stuart, E.A.** (2007). Estimating causal effects using school-level data sets. *Educational Researcher* 36(4): 187-198.
43. *Ho, D.E., Imai, K., King, G., and **Stuart, E.A.** (2007). Matching as nonparametric preprocessing for reducing model dependence in parametric causal inference. *Political Analysis* 15(3): 199-236.
Winner of Warren Miller Prize for best paper published in Volume 15 of *Political Analysis*. Selected as a Fast Breaking Paper in the field of Social Sciences, general, by Thomson Reuters, due to its being one of the most-cited papers in its discipline published between 2006 and 2008 (see <http://sciencewatch.com/dr/fbp/2008/08octfbp/08octfbpHoET/>).
44. *Rubin, D.B. and **Stuart, E.A.** (2006). Affinely invariant matching methods with discriminant mixtures of proportional ellipsoidally symmetric distributions. *The Annals of Statistics* 34(4): 1814-1826.
45. *Rubin, D.B., **Stuart, E.A.**, and Zanutto, E.L. (2004) A potential outcomes view of value-added assessment in education. *Journal of Educational and Behavioral Statistics* 29 (1): 103-116.
46. ***Stuart, E.A.** and Zaslavsky, A.M. (2002) Using administrative records to predict census day residency. In *Case Studies in Bayesian Statistics, Volume VI*, Edited by Gatsonis, C., Kass, R.E., Carriquiry, A., Gelman, A., Higdon, D., Pauler, D.K., Verdinelli, I. New York: Springer, pp. 335-349.
47. Devaney, B. and **Stuart, E.A.** (1998) Eating breakfast: Effects of the School Breakfast Program. *Family Economics and Nutrition Review* 11 (4).

Articles and Editorials not peer reviewed

1. **Stuart, E.A.** (2010). Book review of *Design of Observational Studies* by Paul R. Rosenbaum. *Journal of Educational and Behavioral Statistics* 35(6): 774-778.
2. **Stuart, E.A.** (2008). Developing practical recommendations for the use of propensity scores: Discussion of “A critical appraisal of propensity score matching in the medical literature between 1996 and 2003” by Peter Austin, *Statistics in Medicine. Statistics in Medicine* 27(12): 2062-2065. DOI: 10.1002/sim.3207.
3. *Cook, S.R. and **Stuart, E.A.** (2007) Discussion of Dominici et al. “Does the effect of micronutrient supplementation on neonatal survival vary with respect to the percentiles of the birth weight distribution?” *Bayesian Analysis* 1(5): 33-38.

4. *Rubin, D.B. and **Stuart, E.A.** (2005) Matching with multiple control groups and adjusting for group differences. *2005 Proceedings of the American Statistical Association, Section on Health Policy Statistics* [CD-ROM]. Alexandria, VA: American Statistical Association.
5. **Stuart, E.A.** and Judson, D.H. (2003) An empirical evaluation of the use of administrative records to predict census day residency. *2003 Proceedings of the American Statistical Association, Section on Survey Research Methods* [CD-ROM]. Alexandria, VA: American Statistical Association.
6. *Asher, J., Fienberg, S.E., **Stuart, E.A.** and Zaslavsky, A.M. (2003) Inferences for finite populations using multiple data sources with different reference times." In *Proceedings of Statistics Canada Symposium 2002: Modelling Survey Data for Social and Economic Research*, Ottawa, Ontario: Statistics Canada.
7. ***Stuart, E.A.** and Zaslavsky, A.M. (2001) Using administrative records to predict census day residency. *2001 Proceedings of the American Statistical Association, Section on Survey Research Methods*. Alexandria, VA: American Statistical Association.

Chapters

1. **Stuart, E.A.**, Leoutsakos, J-M., **Gross, A.L., **Kuramoto, S.J., and Eaton, W.W. (in press). An introduction to quantitative methods especially relevant for public mental health. Forthcoming in *Public Mental Health* (Ed.: W.W. Eaton). Oxford University Press.
2. Eaton, W.W., Mojtabai, R., **Stuart, E.A.**, Leoutsakos, J-M.S., Kuramoto, S.J. (in press). Assessment of distress, disorder, impairment and need in the population. Forthcoming in *Public Mental Health* (Ed.: W.W. Eaton). Oxford University Press.
3. **Stuart, E.A.** and Rubin, D.B. (2007). Best practices in quasi-experimental designs: Matching methods for causal inference. Forthcoming in *Best Practices in Quantitative Methods*, Edited by Jason Osborne (Chapter 11, pp. 155-176). New York: Sage Publications.
4. **Stuart, E.A.** (2003) Propensity scores. In *Encyclopedia of Social Science Research Methods*, Edited by Lewis-Beck, M., Bryman, A.E., and Liao, T.F. New York: Sage Publications.

Software

1. Ho, D.E., Imai, K., King, G., and **Stuart, E.A.** (2010). MatchIt. Software and package vignette for nonparametric preprocessing for parametric causal inference; listed at the Comprehensive R Archive Network.

Project Reports and Other

1. Cody, S., Schirm, A., **Stuart, E.**, Castner, L., and Zaslavsky, A. (2008). *Sources of variation in state-level food stamp participation rates*. Report submitted to the U.S. Department of Agriculture Economic Research Service. Washington, DC: Mathematica Policy Research, Inc. <http://www.ers.usda.gov/Publications/CCR37/>
2. *Ho, D.E., Imai, K., King, G., and **Stuart, E.A.** (2006). Replication Data Set for "Matching as Nonparametric Preprocessing for Reducing Model Dependence in Parametric Causal

Inference”, hdl:1902.1/YVDZEQIYDS <http://id.thedata.org/hdl%3A1902.1%2FYVDZEQIYDS> ; UNF:3:QV0mYCd8eV+mJgWDnYct5g== Murray Research Archive [distributor(DDI)]

3. McConnell, S., **Stuart, E.A.**, Fortson, K., Decker, P., Perez-Johnson, I., Harris, B., and Salzman, J. (2006). *Managing Customers' Training Choices: Findings from the Individual Training Account Experiment*. Report submitted to the U.S. Department of Labor, Employment and Training Administration. Washington, DC: Mathematica Policy Research, Inc.
4. Torgesen, J., Myers, D., Schirm, A., **Stuart, E.**, Vartivarian, S., Mansfield, W., Borhnstedt, G., Stancavage, F., Durno, D., Javorsky, R., and Haan, C. (2006). *Closing the reading gap: First-year findings from a randomized trial of four reading interventions for striving readers*. Report submitted to Congress by the Department of Education, Institute of Education Sciences. Washington, DC: Mathematica Policy Research, Inc.
5. **Stuart, E.**, Olsen, R., Schirm, A., Young, J., and DesRoches, D. (2006). *The impacts of regular Upward Bound on postsecondary educational activities within 4-6 years after scheduled high school graduation*. Draft report submitted to the U.S. Department of Education, Policy and Program Studies Service. Washington, DC: Mathematica Policy Research, Inc.
6. Schirm, A., **Stuart, E.**, and McKie, A. (2006). *The Quantum Opportunity Program Demonstration: Final Impacts*. Report submitted to the U.S. Department of Labor, Employment and Training Administration. Washington, DC: Mathematica Policy Research, Inc.
7. Stuart, E.A. (2005). *Estimating school-level causal effects using school-level data sets*. Paper for National Academy of Sciences Board on Testing and Assessment's Symposium on the use of school-level data. Washington, DC: National Academy of Sciences.
8. ***Stuart, E.A.** and Zaslavsky, A.M. (2005). *Using administrative records to predict residency: Final Report*. Submitted to the U.S. Bureau of the Census.

Leslie Thornton	Mental Health	2008
Meredith Weaver	Health, Behavior, and Society	2008
Beth Marshall	Population, Family, and Reproductive Health	2008
Bruce Swihart	Biostatistics	2008
Lok Wong	Health, Policy, and Management	2008
Haley Hedlin	Biostatistics	2008
Julie Leis	Mental Health	2009
Alden Gross	Mental Health	2009
Isadora Gil	Health, Policy, and Management	2009
Amy Daniels	Mental Health	2009
Jennifer McCleary-Sills	Health, Behavior, and Society	2009
Bridget Ambrose	Epidemiology	2009
Camelia Graham	Mental Health	2009
Mara McAdams	Epidemiology	2010
Benjamin Johns	International Health	2010
Brian Weir	Health, Behavior, and Society	2010
Erin Trish	Health, Policy, and Management	2010
Gregory Tung	Health, Policy, and Management	2010
David Hanna	Epidemiology	2010
Dell Simmons	Graduate Training Program in Clinical Investigation	2010
John Ayers	Health, Behavior, and Society	2011

Final Oral Participation (PhD)

Erin McDonald	Health, Behavior, and Society	2007
Xianbin Li	Biostatistics	2008
Chanelle Howe	Epidemiology	2009
Suzanne Goodwin	Health, Policy and Management	2009
Brian Lee	Epidemiology	2009
Beth Marshall	Population, Family, and Reproductive Health	2009
Leslie Thornton	Mental Health	2009
Nirali Shah	International Health	2010
Anna Christensen	Population, Family, and Reproductive Health	2010
Fengmin Zhao	International Health	2010
Alden Gross	Mental Health	2010
Julie Leis	Mental Health	2010
Amy Daniels	Mental Health	2011

Classroom Instruction

Johns Hopkins University

<u>Year</u>	<u>Course/Description</u>	<u>Enrollment</u>
2011	Estimating causal effects in medicine and public health Dept. of Biostatistics 140.664	61
2010	Seminar in statistical methods for mental health	25

	Dept. of Mental Health 330.805	
	Won award for Excellence in Teaching due to excellent course reviews	
2010	Estimating the effects of mental health interventions in non-experimental settings	12
	Mental Health Summer Institute	
2010	Estimating causal effects in medicine and public health	35
	Won award for Excellence in Teaching due to excellent course reviews	
2009	Estimating causal effects in medicine and public health	42
	Dept. of Biostatistics 140.664	
2009	Missing data methods for mental health Research	12
	Mental Health Summer Institute	
2008	Estimating causal effects in medicine and public health	35
	Dept. of Biostatistics 140.664	
2008	Estimating the effects of mental health interventions in non-experimental settings	5
	Mental Health Summer Institute 330.663	
2007	SS/R: Estimating the effects of mental health interventions in non-experimental settings	21
	Mental Health Summer Institute 330.853	
Guest Lectures		
2011	Advanced Statistical Methods in Education Research (M. Stein) JHU School of Education ED.883.720 Instructor for 2 sessions on power analysis	
2009	Doctoral Seminars in Epidemiology (S. Goodman) Co-instructor for 3 sessions on causal inference JHSPH Epidemiology 340.863.01	
2008-2010	Seminars on Methods in Public Mental Health Research (P. Leaf) JHSPH Mental Health 330.660.01	
2006-2011	Prevention of Mental Disorders: Public Health Interventions (N. Ialongo and G. Rebok) JHSPH Mental Health 330.607.01	
2007-2010	Methodologic Challenges in Epidemiologic Research (D. Fallin, T. Glass, S. Cole) JHSPH Epidemiology 340.754.01	
Other institutions		
2006	Causal Inference in Randomized Experiments and Observational Studies Joint Program in Survey Methodology, University of Maryland	

Other Teaching

“Statistical Inference for causal effects in experiments and observational studies through potential outcomes.”

Short course (with Donald B. Rubin and Samantha R. Cook)

Offered at the Food and Drug Administration (2003), Harvard University (2004), the Joint Statistical Meetings (2003), Karolinska Institute (Stockholm; 2004), the Medical College of Wisconsin (2003), the Conference of the Society for Multivariate Analysis in the Behavioral Sciences (SMABS, 2004), Smith College (2005), and the University of Minnesota (2003)

“Power analysis for the behavioral sciences”

Administration for Children and Families, U.S. Department of Health and Human Services, March 2009

“Introduction to Statistics”

State of Delaware Psychiatry Residency Program, March 2009

“Missing Data Methods in Criminology”

Department of Criminology, University of Maryland, April 2009

“Applied Propensity Score Analysis II: Practical Considerations and Lessons for Use”
AcademyHealth webinar, January 2010 (> 100 attendees)

“The how, when, and why of the use of matching methods and propensity scores”
Advanced Quantitative Methods in Education Research, UCLA College of Education, April 2010 (35 attendees)

“Recent advances in missing data methods: Multiple Imputation by Chained Equations.”
AcademyHealth Annual Research Meeting methods seminar, June 2010 (80 attendees).

RESEARCH GRANT PARTICIPATION

Principal Investigator

<u>Title</u>	<u>Agency</u>	<u>Level</u>	<u>Direct Costs</u>
Estimating population effects of mental health interventions (8/2008-7/2013) (K25MH083846)	NIMH	75%	\$727,092
Instrumental variables and propensity score methods when dealing with noncompliance (completed)	JHSPH Faculty Innovations Fund	20%	\$29,557
Using administrative records to predict Census day residency (completed)	U.S. Census Bureau	10%	\$210,000

Co-investigator

<u>Title</u>	<u>Funding Level</u>	<u>PI</u>	<u>Agency</u>
Center for Prevention and Early Intervention	No current support	lalongo	NIMH

Center for the Prevention of Youth Violence No current support Leaf CDC

Community violence & youth: Affect, behavior, academics No current support Cooley NIDA

ACADEMIC SERVICE

Johns Hopkins Bloomberg School of Public Health

Biostatistics Learning Advisory Committee, 2008-

Strategic Plan Steering Committee, 2007-2008

Department of Mental Health seminar coordinator, 2007

Biostatistics and Mental Health Causal Inference Working Group Coordinator, 2007-

Department of Mental Health Admissions Committee, 2008-

PRESENTATIONS

Invited talks at scientific meetings

- “Using administrative records to predict Census day residency.”
Joint Statistical Meetings, Atlanta, GA, 2001.
- “Choosing well matched historical patients to supplement a randomized clinical trial.”
New England Statistics Symposium, Harvard University, Cambridge, MA, 2004.
- “Matching with multiple control groups and adjusting for differences between the groups.”
Joint Statistical Meetings, Minneapolis, MN, 2005.
- “Estimating causal effects using school-level datasets.”
National Academy of Sciences Board on Testing and Assessment’s Symposium on the Use of School-level Data, Washington, DC, 2005.
- “Matching methods for estimating causal effects using multiple control groups.”
Mid-Atlantic causal inference workshop, Columbia University, New York, NY, 2005.
- “Dealing with control group dropout: Using historical patient information to supplement a randomized trial.”
Joint Statistical Meetings, Salt Lake City, UT, 2007.
- “Causal inference in education research.”
American Educational Research Association Dissertation Grants Conference, 2007.
- “Practical issues in implementing multiple imputation.”
Association for Public Policy Analysis and Management Annual Research Meeting, Washington, DC, 2007.
- Discussion of “Is regression adjustment supported by the Neyman model for causal inference?” (P. Schochet).
Association for Public Policy Analysis and Management Annual Research Meeting, Washington, DC, 2007.
- “Defining baseline using propensity score matching: Application to a clinical trial”
International Conference of Health Policy Statistics, Philadelphia, PA, 2008
- “Using historical patient information to supplement a randomized trial: Ensuring comparability and defining baseline”
Sixth annual American Statistical Association Connecticut Chapter Mini-Conference on Applied Causal Inference, 2008.
- Discussion of “Individual and contextual differences in treatment effects: New methodologies for experimental and observational research.” Invited Discussion.
Society for Prevention Research Annual Meeting, San Francisco, CA, 2008.

- “New Directions in Prevention Science: Statistical Methodology.” Invited talk in session “Emerging investigators and emerging ideas in prevention science.” Society for Prevention Research Annual Meeting, San Francisco, CA, 2008.
- “Assessing generalizability: Case study of PBIS.” Statistical and Applied Mathematical Sciences Institute Summer 2008 Program on Meta-analysis: Synthesis and Appraisal of Multiple Sources of Empirical Evidence, Durham, NC, 2008.
- “Using propensity scores to select subjects for follow-up” Probability and Statistics Day, University of Maryland Baltimore County, 2009.
- “The use of propensity scores to assess generalizability” Atlantic Causal Modeling Conference, University of Pennsylvania, 2009.
- “Connections between *Experimental Designs* and non-experimental designs” Joint Statistical Meetings, Washington, DC, 2009.
- “Generalizing evidence from randomized clinical trials to target populations: The ACTG-320 trial” Joint Statistical Meetings, Vancouver, BC, Canada, 2010.
- Invited Discussant, “Estimating Causal Effects”, American Political Science Association Annual Meeting, Washington, DC, 2010
- “From propensity scores to prognosis scores: Matching methods in the context of principal stratification”, Causal Inference in Health Research meeting, Centre de Recherche Mathematiques, Montreal, QC, Canada, 2011

Other talks and posters at scientific meetings presented by E.A. Stuart

- “Matching using two control groups.” Joint Statistical Meetings, San Francisco, CA, 2003.
- “Individual-level multiple systems estimation: Predicting Census day residency.” Joint Statistical Meetings, Toronto, Ontario, 2004.
- “Estimating causal effects using multiple control groups.” Conference for the Society for Multivariate Analysis in the Behavioral Sciences (SMABS), Jena, Germany, 2004.
- “Using historical patients to supplement a randomized trial.” Biennial CDC and ATSDR Symposium on Statistical Methods, Washington, DC, 2005.
- “Estimation of state-level standardized food stamp participation rates.” Joint Statistical Meetings, Seattle, WA, 2006.
- “Design and implementation of case-control matching to estimate the effects of value-added assessment.” American Educational Research Association Meeting, San Francisco, CA, 2006.
- “Making use of limited resources: Optimal selection of subjects for follow-up.” Society for Prevention Research Annual Meeting, Washington, DC, 2007.
- “Learning about broader population effectiveness from an efficacy trial: Case study of PBIS in Maryland.” (Poster). Society for Prevention Research Annual Meeting, Washington, DC, 2007.
- “Using Full Matching to Estimate Causal Effects in Non-Experimental Studies: Examining the Relationship between Adolescent Marijuana Use and Adult Outcomes.” (Poster). Society for Epidemiologic Research, Boston, MA, 2007.
- “Handling missing data: The motivation and method of multiple imputation.” 21st Annual Research Conference: A System of Care for Children’s Mental Health: Expanding the Research Base. Tampa, FL, 2008.

- “Review of designs to increase efficiency of follow-up.”
Prevention Science Methodology Group conference. Baltimore, MD, 2008.
- “Propensity score full matching to estimate causal effects: Motivation and method.”
Society for Prevention Research Annual Meeting, San Francisco, CA, 2008.
- “Assessing generalizability: Case study of PBIS.”
2nd Annual NIH conference on the science of dissemination and implementation: Building research capacity to bridge the gap from science to service. Bethesda, MD, 2009.
- “Combining experimental and population data: Moving towards external validity.” Banff International Research Station Workshop on Causal Inference, Banff, Canada, 2009.
- “Estimating mediation using propensity score matching.”
Society for Prevention Research Annual Meeting, Washington, DC, 2009.
- “Matching methods for selection of subjects for long-term follow-up.”
Society for Prevention Research Annual Meeting, Washington, DC, 2009.
- “Statistical techniques for assessing and increasing external validity.”
American Public Health Association Annual Meeting, Philadelphia, PA, 2009.
- “Methods for assessing the external validity of randomized trial results.” Society for Prevention Research Annual Meeting, Washington, DC, 2011.

Talks and posters presented by students with my involvement

- Harder, V.S., **Stuart, E.A.**, Anthony, J.C. Exploring the developmental pathway of childhood psychopathology, adolescent cannabis problems and young adult major depression. Poster Presentation: American Psychopathological Association, New York City, NY, March 2007.
- Harder, V.S., **Stuart, E.A.**, Anthony, J.C. Applying alternative propensity score techniques to test whether cannabis problem use causes depression. Oral Presentation: Society for Epidemiologic Research, Boston, MA, June 2007.
- Harder, V.S., **Stuart, E.A.**, Anthony, J.C. Early onset cannabis problem use and young adult major depression: Male-female variation. Oral Presentation: College on Problems of Drug Dependence, Quebec City, Canada, June 2007.
- Daniels, A.M., **Stuart, E.A.**, & Azur, M.J. The Effect of Heavy Alcohol Use on Delinquency in Adolescents Served by Mental Health Systems of Care. Poster presented at the Johns Hopkins Bloomberg School of Public Health Conference for the Dissemination of Student Research on Addictions, Infectious Disease, and Public Health, Baltimore, MD, April 2009.
- Kuramoto, S.J., Runeson, B., **Stuart, E.A.**, Wilcox, H.C. Characterizing time at risk to hospitalization for suicide attempt among offspring of suicide decedents. The European Symposium on Suicide and Suicidal Behaviour, Rome, Italy, 2010.
- Gross, A.L., Landa, R., and **Stuart, E.A.** Trajectory of Early Development: ASD, Broader Phenotype, Typical Development. Presentation at the International Meeting for Autism Research, Philadelphia, PA., May 2010.
- Christensen, A.L., Perry, D.F., **Stuart, E.A.**, and Le, H. Social support among low-income Latina immigrants: Resilience against perinatal depression. Symposium presentation at Head Start Research Conference, Washington, D.C., June 2010.
- Christensen, A.L., **Stuart, E.A.**, Perry, D.F., and Le, H. An application of growth mixture modeling in MCH: Unintended pregnancy and perinatal depression trajectories among Hispanic immigrants. Symposium presentation at American Public Health Association conference, Denver, CO, November 2010.

- Warkentian, S., Jo, B., and **Stuart, E.A.** Beyond Binary: Using Propensity Scores to Account for Varying Levels of Program Participation in Randomized Controlled Trials. Society for Research in Educational Effectiveness spring conference, Washington, DC, March 2011.
- Warkentian, S., Jo, B., and **Stuart, E.A.** Beyond Binary: Using Propensity Scores to Account for Varying Levels of Program Participation in Randomized Controlled Trials. Society for Prevention Research Annual Meeting, Washington, DC, 2011.
- Kuramoto, S.J., **Stuart, E.A.**, Latkin, C. Examining trajectories of depressive symptoms among inner-city adult drug users. Society for Prevention Research Annual Meeting, Washington, DC, 2011.
- Zablotsky, B., and **Stuart, E.A.** The Role of Emotional and Social Supports for Parents of Children with Autism. Society for Prevention Research Annual Meeting, Washington, DC, 2011.
- Slates, S., and **Stuart, E.A.** Treatment effect heterogeneity in multi-site impact trials. Society for Prevention Research Annual Meeting, Washington, DC, 2011.
- Kuramoto, S.J., Liu, W., and **Stuart, E.A.** Methods for assessing sensitivity to an unobserved confounder. Society for Prevention Research Annual Meeting, Washington, DC, 2011.

Invited Colloquia

- “Matching methods for estimating causal effects using multiple control groups.” Williams College Department of Mathematics and Statistics, Williamstown, MA, 2003.
- “Matching methods for estimating causal effects using multiple control groups.” Colby College Department of Mathematics and Statistics, Waterville, ME, 2003.
- “Matching methods for estimating causal effects using multiple control groups.” Georgetown University Department of Biostatistics, Washington, DC, 2003.
- “Matching methods for estimating causal effects using multiple control groups.” Boston University Veteran’s Administration, Bedford, MA, 2004.
- “Matching methods for estimating causal effects using multiple control groups.” Harvard University Department of Government, Cambridge, MA, 2004.
- “Matching methods for estimating causal effects using multiple control groups.” University of Washington Department of Biostatistics, Seattle, WA, 2004.
- “Matching methods for estimating causal effects using multiple control groups.” University of Pennsylvania Department of Statistics, Philadelphia, PA, 2004.
- “Matching methods for estimating causal effects using multiple control groups.” The RAND Corporation, Santa Monica, CA, 2004.
- “Matching methods for estimating causal effects using multiple control groups.” Mathematica Policy Research, Inc., Washington, DC, 2004.
- “Matching methods for estimating causal effects using multiple control groups.” Harvard University Department of Biostatistics, Boston, MA, 2004.
- “Evaluation of a school dropout prevention program: Estimation of causal effects through matching.” Smith College Department of Mathematics, Northampton, MA, 2005.
- “Propensity score matching methods for estimating the effect of a school-level intervention.” Johns Hopkins University Department of Mental Health, Washington, DC, 2006.
- “Causal Inference in Political Science and Public Policy Research: Matching as Nonparametric Preprocessing for Improving Parametric Causal Inference.” George Washington University Institute of Public Policy, Washington, DC, 2006.

- “Estimating the effects of PBIS in an observational dataset.”
Johns Hopkins University Causal Inference Working Group, Baltimore, MD, 2006.
- “Propensity score matching with multiple control groups.”
Johns Hopkins University Department of Economics and Department of Biostatistics Causal Inference Workshop, Baltimore, MD, 2006.
- “Defining “baseline” in a propensity score matching analysis: Application to a clinical trial.”
The RAND Corporation, Washington, DC, 2006.
- “Matching methods for estimating causal effects using multiple control groups.”
Prevention Science & Methodology Group, 2007.
- “Statistical methods: Focus on experiments and their complications.”
CHIPS Summer Training Institute, Baltimore, MD, 2007.
- “Propensity scores and matching methods in education research: Designing observational studies.”
U.S. Department of Education, Washington, DC, 2007.
- “What happens when some of the controls get the treatment? Connections to propensity scores, modeling, and clinical trial simulation.”
U.S. Food and Drug Administration, Rockville, MD, 2007.
- “Making use of limited resources: Optimal selection of subjects for follow-up.”
Prevention Science & Methodology Group, 2007.
- “Propensity score matching methods for examining the relationship between adolescent drug use and adult outcomes.”
The University of Chicago, Department of Health Studies, Chicago, IL, 2007.
- “Propensity score matching methods for examining the relationship between adolescent drug use and adult outcomes.”
The Methodology Center, The Pennsylvania State University, State College, PA, 2007.
- “Using Full Matching and Generalized Propensity Scores to Estimate Causal Effects in Non-Experimental Studies”
Survival, Longitudinal, and Multivariate Data Working Group (SLAM), JHSPH, 2008.
- “Review of designs to increase efficiency of follow-up”
Prevention Science & Methodology Group biannual conference, Baltimore, MD, 2008.
- “Principal stratification in experimental and non-experimental studies”
American Institutes for Research, Washington, DC, 2008.
- “Using propensity scores and full matching to examine the relationship between adolescent drug use and adult outcomes”
Initiative in Population Research, Ohio State University, Columbus, OH, 2008
- “Principal stratification Part II: Truncation due to death”
American Institutes for Research, Washington, DC, 2008.
- “Assessing generalizability: Case study of PBIS”
BEAR Program, Graduate School of Education, University of California at Berkeley, Berkeley, CA, 2008.
- “The use of propensity scores in mental health research”
Department of Mental Health, JHSPH, 2009
- “Practical issues in the use of propensity score methods”
Stat-Epi Group, JHSPH, 2009
- “Practical issues in the use of propensity score methods”
Department of Mathematics and Statistics, University of Maryland Baltimore County, 2009
- “The use of propensity scores to assess generalizability”

- Biostatistics Division, Department of Psychiatry, Columbia University, 2009
- “The use of propensity scores to assess generalizability”
Department of Measurement, Statistics, and Evaluation, University of Maryland College of Education, 2010
- “The use of propensity scores to assess generalizability”
Department of Biostatistics, UCLA, 2010
- “The use of propensity scores to assess generalizability”
Department of Biostatistics and Epidemiology, McGill University, 2010
- “The use of propensity scores to assess the generalizability of results from randomized trials”
Prevention Science Methodology Group, 2010
- “The use of propensity scores to assess the generalizability of results from randomized trials”
Division of Biostatistics, University of Maryland Marlene and Stewart Greenebaum Cancer Center, Department of Epidemiology and Public Health
- “The use of propensity scores to assess the generalizability of results from randomized trials”
Institute of Statistics, Ludwig-Maximilians-University, Munich, Germany
- “The use of propensity scores to assess the generalizability of results from randomized trials”
Institute of Psychiatry, University of Jena, Germany
- “The use of propensity scores to assess the generalizability of results from randomized trials”
Institut für Arbeitsmarkt-und Berufsforschung, Nuremberg, Germany

Government Briefings

- “The Quantum Opportunity Program Demonstration: Final Impacts.”
Briefing for Deputy Assistant Secretary, U.S. Department of Labor, Washington, DC, 2006.
- “The Individual Training Accounts Experiment: What Did We Learn?”
Briefing for Deputy Assistant Secretary, U.S. Department of Labor, Washington, DC, 2006.

ADDITIONAL INFORMATION

Personal statement of research and research objectives

Trained as a statistician, my primary research interests are in the development and use of methodology to better design and analyze the effects of public health and educational interventions, either through the use of randomized experiments or well-designed non-experimental studies. In this way I hope to bridge statistical advances and research practice, working with mental health and educational researchers to identify and solve methodological challenges, particularly in the area of prevention research.

My particular methodological interests are in the areas of matching methods for observational studies (such as propensity scores), missing data methods, and Bayesian techniques. I have been involved in large-scale randomized experiments such as the national evaluation of Upward Bound, and have also worked on a variety of non-experimental studies, including the evaluation of school-wide prevention programs and an evaluation of the effects of implementing value-

added assessment techniques in Pennsylvania schools. My recent research interests focus on developing methods to assess when and how results from randomized trials can be generalized to target populations, bridging the internal validity obtained from trials with the external validity that can be obtained by incorporating population-level data.

Keywords

Bayesian modeling, biostatistics, causal inference, external validity, generalizability, multi-level modeling, observational study, prevention research, propensity scores