# JAMES E. PUSTEJOVSKY

# Department of Educational Psychology The University of Texas at Austin 1912 Speedway, Stop D5800 Austin, Tx 78712

# pusto@austin.utexas.edu

#### **EDUCATION**

2013 Ph.D., Northwestern University, Department of Statistics

2003 B.A., Boston College. Major in Economics, minor in German.

## PROFESSIONAL EXPERIENCE

2013-present Assistant Professor, Department of Educational Psychology

Quantitative Methods program

University of Texas at Austin, Austin, TX.

2006-2008 Research Analyst, Distributed Leadership Studies

Northwestern University, Evanston, IL.

2003-2006 Analyst/Senior Analyst

Analysis Group, Boston, MA.

#### **HONORS AND AWARDS**

2016 *Member*, Society for Research Synthesis Methodology

2014 Outstanding Quantitative Dissertation

Division D (Measurement and Research Methodology) of the American Educational

Research Association

2009-2012 Multidisciplinary Program in Educational Sciences Fellowship,

Northwestern University

# **FUNDING**

Institute of Education Sciences, *Response Ratio Effect Sizes for Single-Case Designs with Behavioral Outcome Measures* (R305D160002). Aug. 1, 2016 – Jul. 31, 2018. \$199,690.

#### **ARTICLES**

**Pustejovsky, James E.** & Elizabeth Tipton (2016). Small sample methods for cluster-robust variance estimation and hypothesis testing in fixed effects models. *Journal of Business and Economic Statistics*. In Press. DOI: 10.1080/07350015.2016.1247004

**Pustejovsky, James E.** & Daniel M. Swan (2015). Four methods of analyzing partial interval recording data, with application to single-case research. *Multivariate Behavioral Research*, 50 (3), 365-380. DOI: 10.1080/00273171.2015.1014879

Tipton, Elizabeth & **James E. Pustejovsky** (2015). Small-sample adjustments for tests of moderators and model fit using robust variance estimation in meta-regression. *Journal of Educational and Behavioral Statistics*, 40(6), 604-634. DOI: 10.3102/1076998615606099

Jim, Heather S., **James E. Pustejovsky**, Crystal L. Park, Suzanne C. Danhauer, Allen C. Sherman, George Fitchett, Thomas V Merluzzi, Alexis R. Munoz, Login George, Mallory A. Snyder, & John M. Salsman (2015). Religion, spirituality, and physical health in cancer patients: A meta-analysis. *Cancer*, 121 (21), 3760-3768. DOI: 10.1002/cncr.29353

Salsman, John M., **James E. Pustejovsky**, Heather S. Jim, Alexis R. Munoz, Thomas V. Merluzzi, Login George, Crystal L. Park, Suzanne C. Danhauer, Allen C. Sherman, Mallory A. Snyder, & George Fitchett (2015). A meta-analytic approach to examine the relationship between religion/spirituality and mental health in cancer. *Cancer*, 121 (21), 3769-3778. DOI: 10.1002/cncr.29350

Sherman, Allen C., Thomas V. Merluzzi, **James E. Pustejovsky**, Crystal L. Park, Login George, George Fitchett, Heather S. Jim, Alexis R. Munoz, Suzanne C. Danhauer, Mallory A. Snyder, & John M. Salsman (2015). A meta-analytic review of religious or spiritual involvement and social health among cancer patients. *Cancer*, 121 (21), 3779-3788. DOI: 10.1002/cncr.29352

**Pustejovsky, James E.** (2015). Measurement-comparable effect sizes for single-case studies of free-operant behavior. *Psychological Methods*, 20 (3), 342-359. DOI: 10.1037/met0000019

**Pustejovsky, James E.** & Christopher Runyon (2014). Alternating renewal process models for behavioral observation: Simulation methods and validity implications. *Behavioral Disorders*, 39 (4), 211-227.

**Pustejovsky, James E.**, Larry V. Hedges, and William R. Shadish (2014). Design-comparable effect sizes in multiple baseline designs: A general modeling framework. *Journal of Educational and Behavioral Statistics*, 39 (5), 368-393. DOI: 10.3102/1076998614547577

Shadish, William R., Larry V. Hedges, & **James E. Pustejovsky** (2014). Analysis and meta-analysis of single-case designs with a standardized mean difference statistic: A primer and applications. *Journal of School Psychology*, 52, 123-147. DOI: 10.1016/j.jsp.2013.11.005

**Pustejovsky, James E.** (2014). Converting from d to r to z when the design uses extreme groups, dichotomization, or experimental control. *Psychological Methods*, 19 (1), 92-112. DOI: 10.1037/a0033788

Hedges, Larry V., **James E. Pustejovsky**, & William R. Shadish (2013). A standardized mean difference effect size for multiple baseline designs across individuals. *Research Synthesis Methods*, 4(4), 324-341. DOI: 10.1002/jrsm.1086

Shadish, William R., Larry V. Hedges, **James E. Pustejovsky**, Jonathan G. Boyajian, Kristynn J. Sullivan, Alma Andrade, & Jeannette Barrientos (2013). A *d*-statistic for single-case designs that is equivalent to the usual between-groups *d*-statistic. *Neuropsychological Rehabilitation: An International Journal*, 24 (3-4), 528-553. DOI: 10.1080/09602011.2013.819021

Hedges, Larry V., **James E. Pustejovsky**, & William R. Shadish (2012). A standardized mean difference effect size for single case designs. *Research Synthesis Methods*, *3*, 224-239. DOI: 10.1002/jrsm.1052

Dorner, Lisa M., James P. Spillane, **James E. Pustejovsky** (2011). Organizing for instruction: A comparative study of public, charter, & Catholic schools. *Journal of Educational Change*, 12, 71-98. DOI: <u>10.1007/s10833-010-9147-5</u>

**Pustejovsky, James E.**, James P. Spillane, Ruth Heaton, & W. James Lewis (2009). Understanding teacher leadership in middle school mathematics: A collaborative research effort. *Journal of Mathematics and Science: Collaborative Explorations, 11*, 19-40. Available at <a href="http://www.math.vcu.edu/g1/journal/IssuesOnline.html#11">http://www.math.vcu.edu/g1/journal/IssuesOnline.html#11</a>

**Pustejovsky, James E.** & James P. Spillane (2009). Question-order effects in social network name generators. *Social Networks*, *31*(4), 221-229. DOI: 10.1016/j.socnet.2009.06.001

Spillane, James P., Eric M. Camburn, **James E. Pustejovsky**, Amber Stitziel Pareja, & Geoff Lewis (2008). Taking a distributed perspective: epistemological and methodological tradeoffs in operationalizing the leader-plus aspect. *Journal of Educational Administration*, 46(2), 189-213. DOI: 10.1108/09578230810863262

#### **BOOK CHAPTERS**

**Pustejovsky, James E.**, & John M. Ferron (In Press). Research synthesis and metaanalysis of single-case designs. In J. M. Kauffman, D. P. Hallahan, & P. C. Pullen (Eds.), *Handbook of Special Education*, *2nd Edition*. New York, NY: Routledge.

Shadish, William R., Larry V. Hedges, **James E. Pustejovsky**, David M. Rindskopf, Jonathan G. Boyajian, & Kristynn J. Sullivan (2014). Analyzing Single-Case Designs: d, G, Hierarchical Models, Bayesian Estimators, Generalized Additive Models, and the Hopes and Fears of Researchers about Analyses. In T. R. Kratochwill & J. R. Levin (Eds.), *Single-Case Intervention Research: Methodological and Data-Analysis Advances*. Washington, D.C.: American Psychological Association.

Spillane, James P., Eric M. Camburn, **James E. Pustejovsky**, Amber Stitziel Pareja, & Geoff Lewis (2008). Taking a distributed perspective in studying school leadership and management: The challenge of study operations. Chp. 3 in A. Harris (ed.), *Distributed Leadership: Different Perspectives*. Dortrecht, DE: Springer, 47-80.

# DISCUSSION PAPERS, LETTERS, AND OTHER PUBLISHED WORK

Valentine, Jeffrey C., Emily E. Tanner-Smith, **James E. Pustejovsky**, and Timothy S. Lau (2016). Between-case standardized mean difference effect sizes for single-case designs: A primer and tutorial using the scdhlm web application. Oslo, Norway: The Campbell Collaboration. Retrieved from <a href="https://campbellcollaboration.org/library/effect-sizes-single-case-designs-campbell-discussion-paper-1.html">https://campbellcollaboration.org/library/effect-sizes-single-case-designs-campbell-discussion-paper-1.html</a>

Salsman, John M., **James E. Pustejovsky**, Crystal L. Park, Allen C. Sherman, Thomas V. Merluzzi, Suzanne C. Danhauer, Heather S. Jim, & George Fitchett (2016). Reply to the association between religion/spirituality and mental health in cancer. *Cancer*, 122, 2441-2442. DOI: 10.1002/cncr.30019

#### **UNDER SUBMISSION**

Maggin, Daniel M., Johnson, Austin H., **Pustejovsky**, **James E.**, Shadish, William R., & Chafouleas, Sandra M. (2016). A meta-analysis of school-based group contingency interventions for students with challenging behavior: An update.

Common, Eric A., Lane, Kathleen L., **Pusteovsky, James E.**, Johnson, Austin H., & Johl, Liane E. (2016). Functional assessment-based interventions for students with or at-risk for high incidence disabilities: Field-testing single-case syntheses.

Barton, Erin E., **James E. Pustejovsky**, Daniel M. Maggin, & Brian Reichow (2016). A metaanalysis of technology-aided instruction and intervention for students with ASD.

**Pustejovsky, James E.** (2015). Procedural sensitivities of non-overlap effect sizes for single-case designs.

# **SOFTWARE**

**Pustejovsky, James E.** (2016). *scdhlm: Estimating hierarchical linear models for single-case designs* (R package version 0.3). URL: https://CRAN.R-project.org/package=scdhlm

**Pustejovsky, James E.** (2016). *clubSandwich: Cluster-robust (sandwich) variance estimators with small-sample corrections* (R package version 0.2.1). URL: <a href="https://CRAN.R-project.org/package=clubSandwich">https://CRAN.R-project.org/package=clubSandwich</a>

**Pustejovsky, James E.** (2015). *ARPobservation: Simulating recording procedures for direct observation of behavior* (R package version 1.1). URL: <a href="https://CRAN.R-project.org/package=ARPobservation">https://CRAN.R-project.org/package=ARPobservation</a>

# **CONFERENCE PRESENTATIONS**

**Pustejovsky, James E.** & Elizabeth Tipton. Small-sample methods for cluster-robust variance estimation and hypothesis testing in fixed effects models. Presentation at the Joint Statistical Meetings, July 31, 2016 in Chicago, IL.

**Pustejovsky, James E.** & Elizabeth Tipton. Small-sample adjustments for multiple-contrast hypothesis tests of meta-regressions using robust variance estimation. Presentation at the annual meeting of the Society for Research Synthesis Methods, July 8, 2015 in Nashville, TN.

**Pustejovsky, James E.** Operational sensitivities of non-overlap effect sizes for single-case experimental designs. Poster presented at the American Educational Research Association annual convention, April 19, 2015 in Chicago, IL.

**Pustejovsky, James E.** & Elizabeth Tipton. Small-sample adjustments for F-tests using robust variance estimation in meta-regression. Presentation at the American Educational Research Association annual convention, April 18, 2015 in Chicago, IL.

**Pustejovsky, James E.** Observation procedures and Markov Chain models for estimating the prevalence and incidence of a state behavior. Presentation at the American Educational Research Association annual convention, April 16, 2015 in Chicago, IL.

Tipton, Elizabeth & **James E. Pustejovsky**. Small-sample adjustments for tests of moderators and model fit using robust variance estimation in meta-regression. Presentation at the Society for Research on Educational Effectiveness Conference, March 6, 2015 in Washington, D.C.

Salsman, John M., Alexis R. Munoz, **James E. Pustejovsky**, Heather S. Jim, Crystal L. Park, Suzanne C. Danhauer, Allen C. Sherman, Login George, Thomas V. Merluzzi, & George Fitchett. A meta-analytic approach to examine the relationship between religion/spirituality and mental health in cancer. Presentation at the Annual Conference of the Society for Behavioral Medicine, April 24, 2014 in Philadelphia, PA.

Jim, Heather S., Thomas V Merluzzi, Suzanne C. Danhauer, **James E. Pustejovsky**, Alexis R. Munoz, George Fitchett, Crystal L. Park, Allen C. Sherman, Login George, & John M. Salsman. A meta-analysis of the relationship between religion/spirituality and physical health in cancer survivors. Presentation at the Annual Conference of the Society for Behavioral Medicine, April 24, 2014 in Philadelphia, PA.

Merluzzi, Thomas V., Allen C. Sherman, Crystal L. Park, Login George, George Fitchett, Heather S. Jim, Alexis R. Munoz, **James E. Pustejovsky**, Suzanne C. Danhauer, & John M. Salsman. A meta-analytic review of religion/spirituality and social QOL among cancer patients. Presentation at the Annual Conference of the Society for Behavioral Medicine, April 24, 2014 in Philadelphia, PA.

**Pustejovsky, James E.** & Daniel M. Swan. Four methods of analyzing partial interval recording data, with application to single-case research. Poster presented at the American Educational Research Association annual convention, April 4, 2014 in Philadelphia, PA.

**Pustejovsky, James E.** Addressing construct invalidity in partial interval recording data. Presentation at the Texas Universities Educational Statistics and Psychometrics Meeting, March 21, 2014, at Texas A&M University, College Station, TX.

**Pustejovsky, James E.** On internal validity in multiple baseline designs. Presentation at the Society for Research on Educational Effectiveness Conference, March 6, 2014 in Washington, D.C.

**Pustejovsky, James E.** Effect sizes and measurement comparability for meta-analysis of single-case research. Presentation at the annual convention of the Association for Behavior Analysis International, May 28, 2013 in Minneapolis, MN.

**Pustejovsky, James E.** Observation procedures and Markov chain models for estimating the prevalence and incidence of a behavior. Poster presented at the American Educational Research Association annual convention, April 30, 2013 in San Francisco, CA. *Awarded first place in the Division-D In-Progress Research Poster Competition*.

**Pustejovsky, James E.** Operationally comparable effect sizes for meta-analysis of single-case research. Presentation at the Society for Research on Educational Effectiveness Conference, March 7, 2013 in Washington, D.C.

Hedges, Larry V., William R. Shadish, & **James E. Pustejovsky**. A d-estimator for single case designs. Presentation at the Society for Research Synthesis Methods conference, July 13, 2011 in Ottawa, Canada.

**Pustejovsky, James E.** Power analysis for anticipated non-response in randomized block experimental designs. Poster presented at the Society for Research on Educational Effectiveness Conference, March 3-5, 2011 in Washington, D.C.

**Pustejovsky, James E.** Power analysis for anticipated non-response in simple experimental designs. Poster presented at the Institute for Education Sciences Conference, June 28-30, 2010 in Washington, D.C.

**Pustejovsky, James E.** & James P. Spillane. Question-order effects in social network name generators. Poster presented at the 28th annual International Sunbelt Social Network Conference, January 22-28, 2008, in St. Petersburg Beach, Florida.

## **INVITED PRESENTATIONS**

**Pustejovsky, James E**. Effect sizes for single case research. Presentation at Institute of Education Sciences 2016 Principal Investigators Meeting, December 19, 2016 in Washington, DC.

**Pustejovsky, James E.** When large samples act small: The importance of small-sample adjustments for cluster-robust inference in impact evaluations. Presentation at the American Institutes for Research Impact Working Group Lecture Series, July 18, 2016.

**Pustejovsky, James E.** Some Markov models for direct observation of behavior. Presentation at the Department of Statistics, Northwestern University, May 29, 2013.

**Pustejovsky, James E.** Some implications of behavioral observation procedures for meta-analysis of single-case research. Presentation at the Department of Educational Psychology, College of Education, University of Texas at Austin, November 14, 2012.

#### **SERVICE**

# Teaching:

• Instructor, American Psychological Association Advanced Training Institute on Single-Case Intervention Research. Madison, WI, June 27-July 1, 2016.

#### Editorial board:

- Psychological Bulletin (2015 present)
- Topics in Early Childhood Special Education (2016 present)

# Referee service:

- Methodological referee, Campbell Collaboration (2011 present)
- Reviewer, Field Methods (2011)
- Proposal reviewer, Society for Research on Educational Effectiveness (2012, 2015)
- Reviewer, Behavior Research Methods (2013 2015)
- Reviewer, International Journal of Research & Method in Education (2013)
- Reviewer, Methodology: European Journal of Research Methods for the Behavioral and Social Sciences (2013)
- Reviewer, Journal of School Psychology (2014)
- Reviewer, Psychological Methods (2015 present)
- Reviewer, Psychological Bulletin (2015 present)
- Reviewer, Social Networks (2015)
- Reviewer, Structural Equation Modeling (2015)
- Reviewer, Journal of Research on Educational Effectiveness (2015)
- Reviewer, Developmental Neurorehabilitation (2015)
- Reviewer, Research in Developmental Disabilities (2015)
- Reviewer, Journal for Specialists in Group Work (2015)
- Reviewer, Research Synthesis Methods (2016)
- Reviewer, Journal of Educational and Behavioral Statistics (2016)
- Reviewer, Evaluation Review (2016)
- Reviewer, Multivariate Behavioral Research (2016)

#### **MEMBERSHIP**

American Statistical Association

American Educational Research Association

Society for Research on Educational Effectiveness