

Xu Qin

University of Pittsburgh, School of Education
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EDUCATION

University of Chicago

Ph.D., Quantitative Methods in Education and Human Development 2018
Dissertation: Causal mediation analysis in multisite trials with an evaluation of the Job Corps program
Dissertation Committee: Guanglei Hong (Chair), Stephen Raudenbush, Donald Hedeker,
Margaret Beale Spencer

Renmin University of China

M.S., Statistics 2012
B.S., Statistics 2010

EMPLOYMENT

University of Pittsburgh

Assistant Professor 2018-present
Research Methodology Program, Department of Psychology in Education

HONORS AND AWARDS

Fellowships

National Study of Learning Mindsets Early Career Fellowship, *Bezos Family Foundation* 2018 - 2019
National Academy of Education/Spencer Dissertation Fellowship, *Spencer Foundation* 2017 - 2018
Social Science Division Fellowship, *University of Chicago* 2014 - 2017
Quantitative Methods in Education and Human Development Fellowship,
University of Chicago 2012 - 2014
Social Sciences Summer Fellowship, *University of Chicago* 2013, 2015

Awards

William E. Henry prize for the best PhD dissertation,
Department of Comparative Human Development, University of Chicago 2019
Outstanding Dissertation Award, *American Educational Research Association, Division D* 2019
Joint Statistical Meetings Student Paper Award, *American Statistical Association* 2016
UChicagoGRAD Travel Fund Grant, *University of Chicago* 2016
Advanced Graduate Council Travel Fund Grant, *University of Chicago* 2016
Conference Travel Grant, *Giannino Graduate Research Fund* 2015
Travel Award for the 11th International Conference on Health Policy Statistics (ICHPS),
Health Policy Statistics Section of the American Statistical Association 2015
Best Paper Award for the 7th Forum on International Competitiveness of China's Industries,
Ministry of Commerce of China 2011
National Award for the College Student Innovative Project,
Ministry of Education of China 2009
Excellence Award for the Chinese College Student Statistics Modeling Competition,
National Bureau of Statistics of China 2009
Second Prize for the "Creativity Cup" College Student Academic Paper Competition,
Renmin University of China 2008

Research Funding

Co-Principal Investigator, “Causal Moderation and Mediation Analyses in Single-Site and Multisite Randomized Trials with Noncompliance,” the Institute of Education Sciences (IES) Statistical and Research Methodology in Education Grants. USD 899,920, 2020-2023. (Principle Investigator: Guanglei Hong, University of Chicago)

Co-Principal Investigator. “Student Engagement in Mathematics: A Longitudinal Study of Classroom and Psychosocial Processes,” National Science Foundation, \$1,500,000, 2019-2022. (Principle Investigator: Ming-Te Wang, University of Pittsburgh)

Principal Investigator, “Sensitivity Analysis for Causal Mediation Analysis in the Presence of Unmeasured Pretreatment or Posttreatment Confounding,” Spencer Foundation, \$49,898, 2019-2020.

PAPERS

Peer-Reviewed Articles (* indicates alphabetical authorship)

Wang, M.-T., Binning, K. R., Del Toro, J., **Qin, X.**, & Zepeda, C. (forthcoming). Skill, thrill, and will: The role of metacognition and motivation in predicting student engagement over time. *The Child Development Journal*. (Del Toro and Qin had equal intellectual contribution)

Qin, X., Deutsch, J., & Hong, G. (forthcoming). Unpacking Complex Mediation Mechanisms and Their Heterogeneity between Sites in A Job Corps Evaluation. *The Journal of Policy Analysis and Management*.

Hong, G., Yang, F., & **Qin, X.** (forthcoming). Did you conduct a sensitivity analysis? A new weighting-based approach for evaluations of the average treatment effect for the treated. *Journal of the Royal Statistical Society, Series A: Statistics in Society*.

Qin, X., Hong, G., Deutsch, J., & Bein, E. (2019). Multisite causal mediation analysis in the presence of complex sample and survey designs and non-random nonresponse. *The Journal of the Royal Statistical Society, Series A (Statistics in Society)*, 182(4), 1343-1370.

Hong, G., **Qin, X.**, & Yang, F. (2018). Weighting-based sensitivity analysis in causal mediation studies. *Journal of Educational and Behavioral Statistics*, 43(1), 32-56.

Bein, E., Deutsch, J., Hong, G., Porter, K., **Qin, X.**, & Yang, C. *(2018). Two-step estimation in rmpw analysis. *Statistics in Medicine*, 37(8), 1304-1324.

Qin, X., & Hong, G. (2017). A weighting method for assessing between-site heterogeneity in causal mediation mechanism. *Journal of Educational and Behavioral Statistics*, 42(3), 308-340.

Conference Proceedings

Qin, X., & Hong, G. (2016). Analyzing heterogeneous causal mediation effects in multi-site trials with application to the National Job Corps Study. In *JSM Proceedings*, Survey Research Methods Section. Alexandria, VA: American Statistical Association. pp.910-938.

(* Winner of Joint Statistical Meetings Student Paper Award, American Statistical Association)

Qin, X., & Hong, G. (2014). Causal mediation analysis in multi-site trials: An application of

ratio-of-mediator-probability weighting to the Head Start Impact Study. In *JSM Proceedings*, Social Statistics Section. Alexandria, VA: American Statistical Association, pp.912-926.

SELECTED PRESENTATIONS

Refereed Presentations (# indicates student co-author)

Qin, X. & Yang, F. (2020). *Simulation-Based Sensitivity Analysis for Causal Mediation Analysis*. Society for Research on Educational Effectiveness Spring Virtual Conference.

Qin, X., Wormington, S., # Guzman-Alvarez, A., & Wang, M.-T (2019). *Why does a growth mindset intervention impact achievement differently across secondary schools? Unpacking the mediation mechanism from a national multisite randomized experiment*. Paper presented at the Capstone event of the National Study of Learning Mindsets Early Career Fellowship, Seattle, WA, U.S.

Qin, X., Yang, F. (2019). *Sensitivity Analysis for Causal Mediation Analysis in the Presence of Unmeasured Pretreatment Confounding*. Paper presented at the Joint Statistical Meetings, Denver, Colorado, U.S.

Qin, X., Deutsch, J., Hong, G., & Bein, E. (2018). *Unpacking between-site heterogeneity in complex mediation mechanisms of the Job Corps impact: two concurrent mediators*. Paper presented at the Annual Meeting of the American Educational Research Association, New York city, New York, U.S.

Qin, X., Hong, G., Deutsch, J., & Bein, E. (2018). *A template for multi-site causal mediation analysis*. Paper presented at the Society for Research on Educational Effectiveness spring conference, Washington, DC, U.S.

Qin, X., Deutsch, J., & Hong, G. (2017). *Unpacking between-site heterogeneity in complex mediation mechanisms in the Job Corps impact*. Paper presented at the Association for Public Policy Analysis and Management Fall Research Conference, Washington, DC, U.S.

Hong, G., & **Qin, X.** (2017). *Weighting-Based Sensitivity Analysis in Causal Mediation Studies*. Paper presented at the American Sociological Association Methodology Midyear Meeting, Chicago, Illinois, U.S.

Qin, X., Bein, E., Deutsch, J., Hong, G., Porter, K., & Vigil, A. (2017). *Unpacking complex mediation mechanisms in the multisite Job Corps evaluation*. Paper presented at the Society for Research on Educational Effectiveness spring conference, Washington, DC, U.S.

Qin, X., & Hong, G. (2016). *Analyzing heterogeneous causal mediation effects in multi-site trials with application to the National Job Corps Study*. Topic-contributed paper presented at the Joint Statistical Meetings, Chicago, Illinois, U.S. (* Joint Statistical Meetings Student Paper Award, American Statistical Association)

Qin, X., & Hong, G. (2016). *Investigating heterogeneous causal mediation mechanisms in multi-site trials*. Poster presented at the Annual Meeting of the American Educational Research Association, Washington, DC, U.S.

Qin, X., & Hong, G. (2015). *Weighting methods for assessing mediation effect variation in multi-site trials*. Paper presented at the International Conference on Health Policy Statistics (ICHPS), Providence, Rhode Island, U.S. (* Travel Award, Health Policy Statistics Section of the American Statistical Association.)

Qin, X., & Hong, G. (2015). *Weighting methods for assessing mediation effect variation in multi-site trials with an application to the National Job Corps Study*. Topic-contributed paper presented at the Joint Statistical Meetings, Seattle, Washington, U.S.

Qin, X., & Hong, G. (2014). *Ratio-of-mediator-probability weighting for causal mediation analysis in multi-site*

trials. Poster presented at the Atlantic Causal Inference Conference, Providence, Rhode Island, U.S; paper presented at the VI European Congress of Methodology, Utrecht, Netherlands.

Qin, X., & Hong, G. (2014). *Causal mediation analysis in multi-site trials: an application of ratio-of-mediator-probability weighting to the Head Start Impacts Study*. Paper presented at the Society for Research on Educational Effectiveness spring conference, Washington, DC, U.S; the Joint Statistical Meetings, Boston, Massachusetts, U.S.

Qin, X., Wang, J., Zhao, Y., Wang, L., & Lu, X. (2013). *A comparison study on creativity of college students in China and USA*. Paper presented at the Annual Meeting of the Midwestern Psychological Association, Chicago, Illinois, U.S.

Invited Presentations

Qin, X. (2017). *Evaluating Between-Site Variation of Mediation Mechanisms in the Job Corps Impact Using a Weighting Method*. Invited presentation at the University of Pittsburgh, Pittsburgh, Pennsylvania, U.S.; University of Florida, Gainesville, Florida, U.S.; University of Georgia, Athens, Georgia, U.S.; University of Miami, Miami, Florida, U.S.; University of California, Riverside, California, U.S.; University of Houston, Houston, Texas, U.S.

Qin, X. & Hong, G. (2016). *Evaluating between-site variation of mediation mechanisms in the Job Corps impact using a weighting method*. Invited presentation at the University of Chicago Education Workshop, Chicago, Illinois, U.S.

Qin, X. (2016). *Using potential outcomes to assess heterogeneity of causal mediation mechanism in multi-site trials*. Invited presentation at the University of Notre Dame Quantitative Psychology Program, South Bend, Indiana, U.S.

Qin, X. (2016). *Multi-site causal mediation analysis*. Invited instructor (with Prof. Howard Bloom, Prof. Guanglei Hong, Prof. Lindsay Page, Prof. Stephen Raudenbush, and Prof. Sean Reardon) at the Stanford University Workshop on Learning About and From Variation in Treatment Effects, the Stanford Center for Education Policy Analysis, Stanford, California, U.S.

Qin, X. & Hong, G. (2014). *Causal mediation analysis in multi-site trials*. Invited presentation at the University of Chicago Workshop on Quantitative Research Methods in Education, Health, and Social Sciences, Chicago, Illinois, U.S.

Qin, X. & Wang, J. (2011). *An application of quantile regression model for examining the influence of Chinese innovation capacity on water use efficiency*. Invited presentation at the 58th World Statistics Congress of the International Statistical Institute, Dublin, Ireland.

TEACHING EXPERIENCE

Instructor at the University of Pittsburgh

Hierarchical Linear Modeling (PSYED 3408)	Spring 2019, Spring 2020
Applied Regression Analysis (PSYED 2410)	Fall 2018, Fall 2019
Statistical Methods I (PSYED 2018)	Spring 2018, Fall 2019

Teaching Assistant/ Lab Instructor at the University of Chicago

Applications of Hierarchical Models in Longitudinal and Multilevel Research (SOC1 20112)	
<i>Instructor: Prof. Stephen Raudenbush</i>	Spring 2016
Mediation, Moderation, and Spillover Effects (CHDV 32411)	
<i>Instructor: Prof. Guanglei Hong</i>	Spring 2016

Causal Inference (CHDV 30102)

Instructor: Prof. Guanglei Hong

Spring 2015

Applied Statistics in Human Development Research (CHDV 30101)

Instructor: Prof. Guanglei Hong

Winter 2015; Fall 2017

GRADUATE STUDENT SUPERVISION

Doctoral Theses (committee member)

Conor Brown (2020)

What are you hiding? The Strategic Use of Pay Secrecy to Affect Managerial Honesty.

Master's Theses

Fajer Shamsaldeen (2019)

Predictive Validity Evidence for the Kuwait University Aptitude Test in STEM Colleges.

Supervised Research

Alberto Guzman-Alvarez

Why does a growth mindset intervention impact achievement differently across secondary schools?

Unpacking the causal mediation mechanism from a national multisite randomized experiment

PROFESSIONAL AFFILICATIONS

American Educational Research Association 2015-present

Society for Research on Educational Effectiveness 2014-present

American Statistical Association 2013-present

PROFFESIONAL SERVICES

Session Chair

Applied Statistics Symposium, International Chinese Statistical Association 2017

Referee Service

Sociological Methodology 2020

Journal of the American Statistical Association 2020

Journal of Educational and Behavioral Statistics 2020

Research in Social Stratification and Mobility 2020

Psychological Methods 2017-2020

Multivariate Behavioral Research 2017-2020

Journal of Causal Inference 2019

Sage Open 2017

AERA Open, American Educational Research Association 2016

American Journal of Sociology 2016

COMPUTER SKILLS

Statistical Software: R, SPSS, Stata, SAS, HLM

Applications: LaTeX, Microsoft Office

Developed R Package:

MultisiteMediation (<https://cran.r-project.org/web/packages/MultisiteMediation/index.html>)

rmpw (<https://cran.r-project.org/web/packages/rmpw/index.html>)