

KATHERINE PICO, Ph.D.

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Executive Summary

Educational Psychologist with expertise in applied statistics and quantitative research methods. Independent researcher with a strong publication record and extensive experience designing and conducting research studies in North America, Latin America and East Africa.

- **Advanced Statistical Expertise:** Hierarchical Linear (multilevel) Modeling (HLM), Structural Equation Modeling (SEM), Longitudinal (growth curve) Modeling, Mixture Modeling, Generalized Linear Models, Meta-analysis, Propensity Score Analysis and Psychometrics
- **Statistical Programming Skills:** expert programming in Stata, HLM, Mplus, and SPSS.

Content-area expertise:

- **Gender disparities in Education.** Extensive research and publication on psychosocial factors that contribute to gender and racial disparities in Science Technology Engineering and Mathematics (STEM).
- **Educational Assessment, Measurement and Evaluation.** Dr. Picho takes an integrative approach to research projects by combining her background in program assessment and evaluation, and analytical skills to formulate and address key research questions that inform policy.
- **Survey Design.** Dr. Picho has developed and validated psychological survey tools, which are widely used internationally to assess factors impacting educational outcomes among school children. These tools have also been included in the American Psychological Association (APA) PSYCTESTS database.

Languages: Multi-lingual; English, French, & African Luo.

Education

Ph.D.	Educational Psychology, University of Connecticut, Storrs, CT	2007-2011
MA	Communications, University of Hartford, Hartford CT	2004-2006
BA	Communications (Cum Laude), University of Ottawa, Ontario Canada	1999-2003

Research Grants

2020-2022 **Award:** \$350,000
Organization: National Science Foundation, Broadening Participation Research
Role: Principle Investigator
Research: Testing the Efficacy of a Culturally Responsive Intervention to Broaden Participation and Improve STEM Retention at HBCUs

- Large scale data analysis of U.S. Military physician data, and collaborative research with American Association of Medical Colleges to evaluate new MCAT tests
- Manage all aspects of grant funded research projects from recruiting participants to data management and manuscript development
- **Assistant Professor: Statistics and Quantitative Research Methods,**
Graduate Programs in Health Professions and Education
 - Teach Masters' and PhD level courses in Statistics, Measurement, Evaluation and Assessment
 - Curriculum development
 - Mentoring/ supervising graduate students
- **Grant development**
 - Wrote statistical and methodological sections of research grants

University of Connecticut Health Center Farmington, Connecticut Sept 2012 – Jul 2013
Biostatistics Research Fellow

- Statistical consultant on grant-funded projects
- Research methodologist for grant proposals and clinical and translational research studies
- Statistical data analyst for empirical clinical and translational research studies

University of Hartford Hartford, Connecticut

May 2011 – Sept 2012

Lecturer, Statistics & Research Methods- Psychology Department

- Taught the entire three-sequence undergraduate courses in statistics and research methods
- Mentored students through designing studies and conducting empirical research
- Supervised student-independent studies

**Center for Health, Intervention and Prevention,
University of Connecticut Storrs, Connecticut**

Sept 2009 – May 2011

Meta-analyst

- Collaborated on R01 grant funded meta-analysis projects
- Managed and supervised HIV knowledge meta-analysis projects
- Conducted meta-analyses examining the efficacy of HIV risk reduction interventions in Africa

Teachers for a New Era

University of Connecticut Storrs, Connecticut

Aug 2007- May 2008

Research Assistant- Assessment

- Data analysis & assessment of Teacher Preparation Programs
- Wrote technical reports on assessment
- Organized and coordinated committee meetings

University Teaching

Undergraduate courses

University of Hartford, W. Hartford, CT

- PSY 270W Research Methods and Statistical Analysis I

- PSY 372 Research Methods and Statistical Analysis II
- PSY 470 W Research Methods and Statistical Analysis III
- QNT 230 Business Statistics
- PSY 222 Principles of Learning, Conditioning and Behavior

Graduate courses

- MED 560 Theory to Practice in Health Professions Education: Measurement, Evaluation & Assessment
- MED 805 Advanced Theories: Assessment in Health Professions Education
- EDCI 5065 Educational Psychology- Learning Theories
- EPSY 5195 Research Methods and Analyses Center for Applied Genetics & Technology

Honors & Awards

- American Educational Research Association (**AERA**) 2013
 - Competitive award to participate in the **AERA Institute on Statistical Analysis for Education Policy** on *Mathematics Education and Equity*
- Pre-doctoral Fellowship- University of Connecticut 2011
- Dissertation Award- University of Connecticut 2010
- Neag Graduate Student Leadership Award- University of Connecticut 2010
- Advanced Fellowship for Graduate Students – University of Connecticut 2009
- International Fellowship- American Association of University Women. 2004
- Presidential Award for Academic Excellence- University of Alberta, Canada. 2000

Publications: Peer-reviewed Journal Articles

Note. Asterisks denote collaboration with graduate student (advisee or protégé)

[Google Scholar Citations](#) (Link is current: 09/02/2020)

Citations Indices	All
Citations	503
h-index	13
i10-Index	13

Picho, K., & Turnbull*, A. (in press). The misspecification of stereotype threat theory in empirical research: Consequences and remedies. *Journal of Advanced Academics*.

Picho, K., Rojas, C. T., & Caicedo, A. M. (in press). Exploring latent profiles of stereotype threat susceptibility in U.S. and Colombian students. *Electronic Journal of Research in Educational Psychology*.

Picho, K. (in-review). Different strokes for different folks? Stereotype threat effects on mathematics performance differ by level of susceptibility to threat. *Social Science Research*.

- Picho, K.** (in-review). Black Men Matter Too! Examining stereotype threat and the moderating role of ethnic stigma consciousness in an HBCU. *Cultural Diversity and Ethnic Minority Psychology*
- Picho, K., & Grimm, L. A.** (in-review). Cultural regulatory focus moderates stereotype threat in African contexts. *Basic and Applied Social Psychology*.
- Picho, K., & Schmader, T.** (2018). When do gender stereotypes impair math performance? A study of stereotype threat among Ugandan adolescents. *Sex Roles*, doi:10.1007/s11199-017-0780-9
- Ratcliffe, T., McBee, E., **Picho, K.**, Schuwirth, L., Leppink, J., van der Vleuten, C., & Durning, S. J. (2017). Exploring Implications of Context Specificity and Cognitive Load in Intermediates. *Meded Publish*. doi: <https://doi.org/10.15694/mep.2017.000048>
- Torre, D., Daley, B., **Picho, K.** & Durning, S. (2017). Group Concept Mapping: An approach to explore group knowledge organization and collaborative learning in senior medical students. *Medical Teacher*, 1-6. <http://dx.doi.org/10.1080/0142159X.2017.1342030>
- Maggio, L., Artino, A., **Picho, K.**, & Driessen, E. (2017). Are you sure you want to do that? Fostering the responsible conduct of medical education research. *Academic Medicine*. doi:10.1097/ACM.0000000000001805
- Torre, D., & **Picho, K.** (2016). Threats to internal and external validity in Health Professions Education Research. *Academic Medicine: Journal of the Association of American Medical Colleges*, 91(12), e21. doi:10.1097/ACM.0000000000001446
- Picho, K.**, Maggio, L., & Artino, A. R. (2016). Science: The slow march of accumulating evidence. *Perspectives on Medical Education*. doi: 10.1007/s40037-016-0305-1
- Picho, K.**, & Artino, A. R. (2016). 7 deadly sins in educational research. *Journal of Graduate Medical Education*. <http://dx.doi.org/10.4300/JGME-D-16-00332.1>
- Picho, K.** (2016). The psychosocial experience of high school females susceptible to stereotype threat. *Journal of Educational Research* <http://dx.doi.org/10.1080/00220671.2015.1010192>
- Martin, K. S., Colantonio, A. G., **Picho, K.**, Boyle, K. E. (2016) Self-Efficacy is associated with increased food security in novel food pantry. *Journal of Social Science and Medicine-Population Health*, 2, 62-67
- McCoach, D. B., Newton, S. D., Siegle, D., Baslanti, U, & **Picho, K.** (2015). Is Having Low Motivation the Same as Not Having High Motivation? Comparing the CSAS-R and the SAAS-R. *High Ability Studies*
- Picho, K.**, Gilliland, W., Artino, A. R., DeZee, K., McManigle, J. E, Dong, T., Cruess, D. F., & Durning, S. J. (2015). Assessing curriculum effectiveness: A survey of Uniformed Services University medical school graduates. *Military Medicine* 180(4), 113-128

- Durning, S.J., Dong, T., LaRochelle, J. L., Artino, A.R., Gilliland, W., DeZee, K. J., Saguil, A., Cruess, D. J., **Picho, K.**, & McManigle, J. E. (2015). The Long-term career outcome study: Lessons learned and implications for educational practice. *Military Medicine* 180(4), 164-170
- McBee, E., Ratcliffe, T., Goldszmidt, M., Schuwirth, L., **Picho, K.**, Artino, A., Masel, J., & Durning, S. J. (2015). Clinical reasoning tasks and resident physicians: what do they reason about? *Academic Medicine* doi: 10.1097/ACM.0000000000001024
- McBee, E., Ratcliffe, T., **Picho, K.**, Schuwirth, L., Artino, A., Yepes-Rios, M., Masel, J., van der Vleuten, C., & Durning, S. J. (2015). Consequences of contextual factors on clinical reasoning in resident physicians. *Advances in Health Sciences Education* DOI 10.1007/s10459-015-9597-x
- Picho, K.**, Rodriguez, A., & Finnie, L. (2013). Exploring the moderating role of context on the mathematics performance of females under stereotype threat: A meta-analysis. *Journal of Social Psychology*, 153(3), 299-333
- Coman, N. C., **Picho, K.**, McArdle, J. J., Villagra, V., Dierker, L., & Lordarche, E. (2013). The paired t-test as a simple latent change score model. *Frontiers in Quantitative Measurement and Psychology*. doi: 10.3389/fpsyg.2013.00738
- Hutchins-Wiese, H. L., **Picho, K.**, Watkins, B. A., Yong, L., Tannenbaum, S., Claffey, K., & Kenny, A. M. (2013). High dose eicosapentaenoic acid and docosahexaenoic acid supplementation reduces bone resorption in postmenopausal breast cancer survivors on aromatase inhibitors: a pilot study. *Nutrition and Cancer*, 1-9 doi: 10.1080/01635581.2014.847964
- Picho, K.**, & Brown, S. W. (2012). Can stereotype threat be measured? A validation of the Social Identities and Attitudes Scale (SIAS). *Journal of Advanced Academics*, 22 (3), 374 – 411
- Picho, K.** & Stephens, J. M. (2012). Culture, context and stereotype threat: A comparative analysis of young Ugandan women in single-sex and coed schools. *Journal of Educational Research*. 105, 52-63
- Picho, K.**, Katrichis, J. M., & McCoach, D. B. (2010). Developing and validating the Females in Mathematics Scale, FIMS. *International Journal of Educational and Psychological Assessment*, 5, 77-100

Workshops and Conference Papers: International, National & Regional

Note. Asterisks denote collaboration with graduate student (advisee or protégé)

Workshop: Katherine Picho (Course Director & Instructor) & Marie Plaisime* (Co-instructor)
Using Factor Analysis for Survey Design and Validation
 2020 American Educational Research Association (AERA) Virtual Learning Series

Workshop: Katherine Picho (Course Director & Instructor) & Emmanuel Sikali (Co-instructor)
Advanced Survey Design & Validation
 2019 American Educational Research Association (AERA) Annual Meeting in
 Toronto, Canada

Picho, K., Cleary, T. J., Durning, S. J., & Artino, A. R. (2016, November). *Exploring the links between medical students' judgments of performance and their behavior in a virtual-patient case.* Poster presented at the annual meeting of the Association of American Medical Colleges, Seattle, WA.

Picho, K., Cleary, T., Durning, S. J., Leppink, J., Artino, A. R. (2015, September). *Assessing self-regulated learning and clinical reasoning in a virtual patient case.* Paper presented at the Annual Association for Medical Education in Europe, Glasgow, Scotland.

Picho, K. (2015, April). *Stemming the tide in Science Technology Engineering and Mathematics (STEM): Current perspectives and directions.* Presented at the Gender gaps and STEM achievement conference, Cali Colombia.

Brown, S., Rojas, T., **Picho, K.,** & Yukhymenko, M. (2015, January). *The development of international students as global citizens: Data from four countries.* Paper presented at the 13th Annual Hawaii International Conference on Education, Hawaii Research Association Conference, Honolulu, Hawaii.

Martin K, Colantonio A, & **Picho K.** (2014, November). *Relationship between food insecurity and self-efficacy in a food pantry intervention: A randomized control study.* Poster Presented at the annual meeting of the American Public Health Association, New Orleans, LA.

Hasham, M., Paruolo, J., **Picho, K.,** Wu, U., Garner, J., & Bieluch, V. (2014, May). *Utility of the HOCC Severe SIRS Early Warning System for Detection of Sepsis.* Presented at the CT Infectious Disease Society, Hartford, CT.

Picho, K., Caicedo, A., & Rojas, T. (2013, May). *Identifying latent profiles of Stereotype Threat Susceptibility among college students in Colombia.* Paper presented at the 25th annual meeting of the Association for Psychological Science, Washington, DC.

McCoach, D. B., **Picho, K.,** & Siegle, D. (2013, April). *Measuring underachievement: Comparing the CSAS and the SAAS-R.* Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA.

Brown, S., Rojas, T., **Picho, K.,** Yukhymenko, M. (2013, February). *The development of the identity as a global citizen in students.* Paper presented at the 2013 Eastern Educational Research Association Conference, Sarasota, FL.

Picho, K., & Finnie, L. (2012, May). *Latent profile analysis of stereotype threat susceptibility among students in physical science domains*. Paper presented at the 2nd annual meeting of the Modern Modeling Methods Conference, Storrs, CT.

Johnson, B. T., **Picho, K.,** Huedo-Medina, T. B., Warren, M., & Ballester, E. (2011, September). *Active ingredients in behavioural interventions for HIV prevention in African nations: A meta-analysis*. Paper presented at the 25th European Health Psychology Conference, Crete, Greece

Johnson, B. T., **Picho, K.,** & Huedo-Medina, T.B. (2010, July). *Efficacy of interventions with behavioral components for HIV prevention in Africa: A meta-analysis*. Paper presented at the Eighteenth International AIDS Conference, Vienna, Austria.

Picho, K., & Brown, S. (2010, May). *Confirmatory factor analysis of a stereotype threat measure: The Social Identities and Attitudes Scale (SIAS)*. Paper presented at the annual meeting of the American Educational Research Association, Denver, CO.

Picho, K., & Stephens, J. (2010, May). *Examining stereotype threat effects in non-Western cultures*. Paper presented at the annual meeting of the American Educational Research Association, Denver, CO.

McCoach, D. B., & **Picho, K.** (2010, May). *Validation of Challenges to Scholastic Achievement Scale (CSAS): Comparing the CSAS and the SAAS-R*. Paper presented at the annual meeting of the American Educational Research Association, Denver, CO.

Picho, K., & Brown, S. W. (2009, October). *Creating and validating the Social Identities and Attitudes Scale (SIAS): A measure of stereotype threat*. Paper presented at the annual meeting of the Northeastern Educational Research Association, Rocky Hill, CT.

Picho, K., & McCoach, D. B. (2008, October). *Development and validation of instruments in the affective domain*. Paper presented at the annual meeting of the Northeastern Educational Research Association, Rocky Hill, CT.

Professional Memberships

- American Statistical Association (ASA)
- American Association of University Women (AAUW)
- American Educational Research Association (AERA)
- Center for Health, Intervention, and Prevention (CHIP)
- Northeast Educational Research Association (NERA)

Academic Service

Dissertation Committee

- **External Evaluator** **Nov 2017**
"Investigating the Motivation Orientations and Racial Identity of Black Women in STEM" – Inez Moore
- **Member** **2019- Present**

"The Effect of Racial Bias & Interracial Anxiety on Medical Judgment and its Role in Perpetuating Patient Discrimination in Healthcare" – Marie Plaisime

- **Member**

2020- Present

"African American English Articulation Screener and Its Impact on Differentiating Speech Sound Delays/Disorder within Dialect" – Caprice Lee

Professional Service

Statistical Consultant

Global Emergency Care Collaborative
Journal of Black Psychology

Journal Reviewer (Past and Present) – *Peer reviewed Journals*

2017	Psychological Bulletin
2016	Personality & Social Psychology Bulletin
2015	Perspectives in Medical Education Research in Medical Education
2014	Journal of Graduate Medical Education
2012	Advancing Women in Leadership
2011	Developmental Psychology Journal of Personality & Social Psychology
2010	Journal of Advanced Academics
2009	Journal of Health and Psychology