SEUNG W. CHOI

CURRICULUM VITAE

Contact Information

Affiliation	The University of Texas at Austin Department of Educational Psychology
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Academic Background

Ph.D.	Educational Psychology (Psychometrics), University of Texas at Austin, 1996
M.A.	Educational Psychology (Quantitative Methods and Statistics), University of Texas at Austin, 1992

Professional Experience

Department of Educational Psychology, University of Texas at Austin
Austin, Texas: June 2018 to Present
Professor / Director: Responsible for teaching courses in psychometrics in the Quantitative Methods program; conducting both basic and applied psychometric research as the Director of the Center for Applied Psychometric Research

Department of Population Health, Dell Medical School
Austin, Texas: August 2018 to Present
Professor: Courtesy appointment

Department of Medical Social Sciences, Northwestern University Feinberg School of Medicine
Chicago, Illinois: June 2018 to Present
Adjunct Professor: Collaborating on methodological and applied psychometric research in medical/health outcomes measurement

Department of Medical Social Sciences, Northwestern University Feinberg School of Medicine
Chicago, Illinois: August 2012 to May 2018

Adjunct Associate Professor: Provided technical consultations on psychometric and health outcomes measurement projects; collaborated on methodological and applied psychometric research, leveraging IRT, CAT, and scale linking

ACT Inc. | Pacific Metrics
Monterey, California: August 2016 to March 2018
Principal Research Scientist: Responsible for conducting both basic and product-driven research to advance the psychometric theory and practice of computerized testing, optimal test design, and Bayesian estimation

Data Recognition Corporation | CTB
Monterey, California: July 2015 to July 2016
Senior Director of Research: Responsible for designing and implementing psychometric studies for large-scale statewide student assessment programs; provided consultations and technical leadership

McGraw-Hill Education CTB
Monterey, California: August 2012 to June 2015
Senior Director of Research / Chief Psychometrician: Oversaw the Research Department comprised of research scientists and statistical analysts for the development of nationally normed student assessment products. Provided psychometric services to state education agencies for the design, implementation, and reporting of large-scale statewide student assessment programs

Department of Medical Social Sciences, Northwestern University Feinberg School of Medicine: Chicago, Illinois: 2007 to July 2012
Assistant Professor: Responsible for conducting psychometric research in health outcomes measurement
Director of Psychometrics and Biostatistics: Responsible for directing a group of psychometricians and statistical analysts for federally funded research projects

Evanston Northwestern Healthcare
Evanston, Illinois: 2006 to 2009
Director of Computerized Adaptive Technologies: Responsible for researching and developing computerized adaptive testing methodologies in health outcomes measurement

CTB/McGraw-Hill Education
Monterey, California: 2002 to 2006

Research Manager: Responsible for managing a team of research scientists and associates and overseeing the design and implementation of large-scale statewide student assessment programs

Senior Research Scientist: Responsibilities included project supervision and monitoring statewide testing programs. Principal duties included planning and designing assessment programs, research monitoring, developing research specifications for scaling and equating, and designing research studies

Oregon State Department of Education

Salem, Oregon: 1996 to 2002

Lead Assessment Specialist: Responsible for conducting psychometric research studies pertinent to the development, implementation, analysis, and evaluation of the Oregon statewide assessment program; analyzed annual student assessment data using various statistical and psychometric methods

Department of Psychology, University of Oregon

Eugene, Oregon: 2002 to 2002

Adjunct Assistant Professor: Taught an intermediate level statistical modeling course offered to Doctoral and advanced Masters-level students in Psychology and other disciplines

Texas Education Agency
Austin, Texas: 1996 to 1996

Education Program Director: Responsible for directing a longitudinal research study on student retention in the Texas public school system using large educational information management systems

Department of Educational Psychology, University of Texas at Austin

Austin, Texas: 1992 to 1995

Teaching Assistant: Assisted in courses including Experimental Design and Statistical Inference, Correlation & Regression Methods, Survey of Multivariate Methods, and Introduction to Statistics

Measurement and Evaluation Center, University of Texas at Austin,

Austin, Texas: 1994 to 1995

Research Assistant: Responsible for analysis, management, and archiving of survey research data; developed computer programs for computerized adaptive testing, validity and standard setting studies, and other psychometric analyses

Publications

Fitzpatrick, S. J., **Choi, S. W**., Chen, S., Hou, L., & Dodd, B. G. (1994). IRTINFO: SAS macros to compute item and test information functions. *Applied Psychological Measurement*, 18, 390.

Choi, S. W., Cook, K., & Dodd, B. G. (1997). Parameter recovery for the partial credit model using MULTILOG. *Journal of Outcome Measures*, 1, 114-142.

Choi, S. W. (2000). CIA-D: A SAS program for classical item analysis of dichotomously scored items. *Applied Psychological Measurement*, 24, 190.

Cella, D., Gershon, R., Lai, J.-S., & **Choi, S. W**. (2007). The future of outcomes measurement: Item banking, tailored short-forms, and computerized adaptive assessment. *Quality of Life Research*, 16, 133-141.

Hahn, E. A., Rao, D., Cella, D., & **Choi, S. W.** (2008). Comparability of interview- and self-administration of the Functional Assessment of Cancer Therapy-General (FACT-G) in English- and Spanish-speaking ambulatory cancer patients. *Medical Care*, 46, 423-431.

Kim, D.-I., **Choi, S. W.,** Lee, G., & Um, K. R. (2008). A Comparison of the common-item and random-groups equating designs using empirical data. *International Journal of Selection and Assessmen*t, 16, 83-92.

Cook, K.F., **Choi, S. W.**, Crane, P.K., Deyo, R.A., Johnson, K.L., and Amtmann, D. (2008). Letting the CAT out of the Bag: Comparing Computer Adaptive Tests and an Eleven-Item Short Form of the Roland-Morris Disability Questionnaire. *Spine*, 33, 1378-1383.

Rao, D., Debb, S., Blitz, D., **Choi, S. W.**, Cella, D. (2008). Ethnic/Racial Differences in the Health Related Quality of Life of Cancer Patients. *Journal of Pain and Symptom Management*, 36(5), 488-496.

Debb, S. M., Blitz, D. L., & **Choi, S. W.** (2009). Quality of life differences in an African American and Caucasian sample of chronic illness patients: Assessment of differential item functioning. *The New School Psychology Bulletin*, 6, 33-42.

Choi, S. W. (2009). Computerized Adaptive Testing Simulation Program for Polytomous IRT Models. *Applied Psychological Measurement*. 33, 644-645.

Choi, S. W., & Swartz, J. R. (2009). Comparison of CAT Item Selection Criteria for Polytomous Items. *Applied Psychological Measurement*. 33, 419-440.

Yost, K. J., Webster, K., Baker, D. W., **Choi, S. W.**, Bode, R. K., & Hahn, E. A. (2009). Bilingual health literacy assessment using the Talking Touchscreen / la Pantalla Parlanchina: Development and pilot testing. *Patient Education and Counseling*, 75, 295-301.

Hart, D. L., Werneke, M. W., George, S. Z., Matheson, J. W., Wang, Y.-C., Cook, K. F., Mioduski, J. E., & **Choi, S. W.** (2009). Screening for elevated levels of fear-avoidance beliefs of work or physical activities in patients receiving outpatient therapy. *Physical Therapy*, 89, 770- 785.

Rao, D., **Choi, S. W.**, Victorson, D., Bode, R., Peterman, A., Heinemann, A., Cella, D. (2009). Measuring stigma across neurological conditions: The development of the stigma scale for chronic illness (SSCI). *Quality of Life Research*. 18, 585-595.

Teresi, J.A., Ocepek-Welikson, K., Kleinman, M., Eimicke, J.P., Crane, P.K., Jones, R.N., Lai, J-S., **Choi, S.W.**, Hays, R.D., Reeve, B.B., Reise, S.P., Pilkonis, P.A., Cella, D. (2009). Analysis of differential item functioning in the depression item bank from the Patient Reported Outcome Measurement Information System (PROMIS): An item response theory approach. *Psychology Science Quarterly*, 51, 148-180.

Kushner, R., & **Choi, S. W.** (2010). Prevalence of Unhealthy Lifestyle Patterns among Overweight and Obese Adults. *Obesity*, 18, 1160-1167.

Choi, S. W., Reise, S. P., Pilkonis, P. A., Hays, R. D., & Cella, D. (2010). Efficiency of static and computer adaptive short forms compared to full length measures of depressive symptoms. *Quality of Life Research*. 19, 125-136.

Hahn, E. A., Du, H., Garcia, S. F., **Choi, S. W.**, Lai, J. -S., Victorson, D., & Cella, D. (2010). Literacy-fair measurement of health-related quality of life will facilitate comparative

effectiveness research in Spanish-speaking cancer outpatients. *Medical Care*, 48, S75-82.

Choi, S. W. (2010). PERSONz: Person Misfit Detection using the lz Statistic and Monte Carlo Simulations. *Applied Psychological measurement*. 34, 457–458.

Cook, K. F., **Choi, S. W.**, Johnson, K. L., Amtmann, D. (2010). Developing brief fatigue short forms calibrated to a common mathematical metric: Is content-balancing important? *Patient Related Outcome Measures*. 1, 65-71.

Amtmann, D., Cook, K. F., Jensen, M. P., Chen, W.-H., **Choi, S. W.**, Revicki, D., Cella, D., Rothrock, N., Keefe, F., & Callahan, L. (2010). Development of a PROMIS item bank to measure pain inference. *Pain*, 150, 173-82.

Ruo, B., **Choi, S. W.**, Baker, D. W., Grady, K. L., Cella, D. (2010) Development and validation of a computer adaptive test for measuring dyspnea in heart failure. *Journal of Cardiac Failure*. 16, 659-668.

Cella, D., Riley, W., Stone, A. A., Rothrock, N., Reeve, B. B., Yount, S., Amtmann, D., **Choi, S.**, Cook, K. F., DeVellis, R., DeWalt, D. A., Fries, J. F., Gershon, R., Hahn, E. A., Pilkonis, P., Revicki, D., Rose, M., Weinfurt, K., Hays, R. D., & PROMIS Cooperative Group. (2010). The Patient-Reported Outcomes Measurement Information System (PROMIS) developed and tested its first wave of adult self-reported health outcome item banks: 2005–2008. *Journal of Clinical Epidemiology*. 63, 1179-1194.

Choi, S. W., Victorson, D. E., Yount, S., Anton, S., & Cella, D. (2011). Development of a Conceptual Framework and Calibrated Item Banks to Measure Patient Reported Dyspnea Severity and Related Functional Limitations. *Value in Healt*h. 14, 291-306.

Yount, S. E., **Choi, S. W.**, Victorson, D., Ruo, B., Cella, D., Anton, S., & Hamilton, A. (2011). Brief, valid measures of dyspnea and related functional limitations in chronic obstructive pulmonary disease (COPD). *Value in Health*, 14, 307-315.

Choi, S. W., Grady, M., & Dodd, B. G. (2011). A new stopping rule for computerized adaptive testing. *Educational and Psychological Measurement*. 71, 37-53.

Cook, K. F., Bombardier, C. H., Alyssa, B. M., **Choi, S. W.**, Kroenke, K., Fann, J. R. (2011). Do Somatic and Cognitive Symptoms of Traumatic Brain Injury Confound Depression Screening? *Archives of Physical Medicine and Rehabilitation*. 92, 818-823.

Hahn, E., **Choi, S. W.**, Griffith, J. W., Yost, K. J., & Baker, D. W. (2011). Health Literacy Assessment Using Talking Touchscreen Technology (Health LiTT): A New Item Response Theory-based Measure of Health Literacy. *Journal of Health Communication*, 16, 150-162.

Lai, J.-S., Cella, D., **Choi, S. W.**, Junghaenel, D. U., Christodoulou, C., Gershon, R., & Stone, A. (2011). How item banks and their application can influence measurement practice in rehabilitation medicine: A PROMIS fatigue item bank example. *Archives of Physical Medicine and Rehabilitation*, 92, 520-527.

Choi, S. W., Gibbons, L. E., Crane, P. K. (2011). lordif: An R Package for Detecting Differential Item Functioning Using Iterative Hybrid Ordinal Logistic Regression/Item Response Theory and Monte Carlo Simulations. *Journal of Statistical Software*, 39(8), 1-30. URL http://www.jstatsoft.org/v39/i08/

Pilkonis, P. A., **Choi, S. W.**, Reise, S. P., Stover, A. M., Riley, W. T., & Cella, D. (2011). Item Banks for Measuring Emotional Distress from the Patient-Reported Outcomes Measurement Information System (PROMIS): Depression, Anxiety, and Anger. *Assessment*, 18, 263-283.

Carle, A. C., Cella, D., Cai, L., **Choi, S. W.**, et. al. (2011). Advancing PROMIS's methodology: results of the Third Patient-Reported Outcomes Measurement Information System (PROMIS®) Psychometric Summit. *Expert Reviews of Pharmacoeconomics & Outcomes Research*, 11, 677-684.

Yao, J. C., Beaumont, J. L. Cella, D., **Choi, S. W.**, et. al. (2011). Characteristics associated with health-related quality of life of patients with neuroendocrine tumor (NET). *Gastroenterology*, 140, S874.

Choi, S. W., Podrabsky, T., & McKinney, N. (2012). Firestar-D: Computerized Adaptive Testing Simulation Program for Dichotomous Item Response Theory Models. *Applied Psychological Measurement*, 36, 67-68.

Beaument, J., Cella, D., Phan, A. T., **Choi, S. W.**, Liu, Z., & Yao, J. C. (2012). Comparison of health-related quality of life in patients with neuroendocrine tumors to quality of life in the general US population. *Pancreas*, 41, 461-466.

Gershon, R. C., Lai, J.-S., Bode, R., **Choi, S. W**., et. al. (2011). Neuro-QOL: Quality of life item banks for adults with neurological disorders: item development and calibrations based upon clinical and general population testing, *Quality of Life Research*. 21, 475-486.

Cella, D., Lai, J.-S., Nowinski, C. J., et. al. (2012). Neuro-QOL: Brief measures of health-related quality of life for clinical research in neurology. *Neurology*, 78, 1860-1867.

Noonan, V. K., Cook, K. F., Bamer, A. M., **Choi, S. W.**, Kim, J., & Amtmann, D. A. (2012). Measuring fatigue in persons with multiple sclerosis: Creating a crosswalk between the Modified Fatigue Impact Scale and the PROMIS Fatigue short form. *Quality of Life Research*, 21, 1123-33.

Teresi, J. A., Ramirez, M., Jones, R. N., **Choi, S. W.**, & Crane, P. K. (2012). Modifying measures based on differential item functioning (DIF) impact analyses. *Journal of Aging and Health*, 24, 1044-1076.

Molina, Y., **Choi, S. W.**, Cella, D., Rao, D. (2013). The Stigma Scale for Chronic Illnesses 8-item version (SSCI-8): Development, validation, and use across neurological conditions. International *Journal of Behavioral Medicine*. 20, 450-460.

Wakschlag, L., **Choi, S. W.**, Carter, A. S., Hullsiek, H., Burns, J., McCarthy, K., & Briggs-Gowan, M. J. (2012). Defining the developmental parameters of temper loss in early childhood: Implications for developmental psychopathology. *Journal of Child Psychology and Psychiatry*. 53, 1099-1108.

Pilkonis, P. A., **Choi, S. W.**, Salsman, J. M., Butt, Z., et. al. (2012). Assessment of self-reported negative affect in the NIH Toolbox, *Psychiatry Research*, 30, 88-97.

Schneider, S., **Choi, S. W.**, Junghaenel, D. U., Schwartz, J. E., Stone, A. A. (2013). Psychometric characteristics of daily diaries for the Patient-Reported Outcomes Measurement Information System (PROMIS®): a preliminary investigation. *Quality of Life Research*, 22, 1859-1869.

Beaumont, J. L., Havlik, R., Cook, K. F., Hays, R. D., Wallner-Allen, K., Korper, S. P., Lai, J.- S., **Choi, S. W**., Yost, K. J., et. al. (2013), Norming plans for the NIH Toolbox, *Neurology*, 80, S87-S92.

Salsman, J. M., Victorson, D., **Choi, S. W.**, Peterman, A. H., Heinemann, A. W., Nowinski, C.,

& Cella, D. (2013). Development and validation of the positive affect and well-being scale for the neurology quality of life (Neuro-QOL) measurement system. *Quality of Life Research*, 22, 2569-2580.

Salsman, J. M., Zeehan, B., Pilkonis, P. A., et. al. (2013). Emotion Assessment using the NIH Toolbox. *Neurology*, 80, S76-S86.

Victorson, D. E., **Choi, S. W.**, Judson, M. A., & Cella, D. (2014). Development and testing of item response theory-based item banks and short forms for eye, skin and lung problems in sarcoidosis. *Quality of Life Research*, 23, 1301-1313.

Choi, S. W., Schalet, B., Cook, K. F., & Cella, D. (2014). Establishing a Common Metric for Depressive Symptoms: Linking the BDI-II, CES-D, and PHQ-9 to PROMIS Depression. *Psychological Assessment*, 26, 513-527.

Schalet, B. D., Cook, K. F., **Choi, S. W.**, & Cella, D. (2014). Establishing a common metric for self-reported anxiety: Linking the MASQ, PANAS, and GAD-7 to PROMIS Anxiety. *Journal of Anxiety Disorders*, 28, 88-96.

Wakschlag, L. S., Briggs-Gowan, M. J., **Choi, S. W.**, Nichols, S. R., et. al. (2014). Advancing a multidimensional, developmental spectrum approach to preschool disruptive behavior. *Journal of the American Academy of Child and Adolescent Psychiatry*, 53, 82-96.

Cella, D., **Choi, S. W.**, Garcia, S., Cook, K. F., et. al. (2014). Setting standards for severity of common symptoms in oncology using the PROMIS item banks and expert judgment. *Quality of Life Research*, 23, 2651-2661.

Sinharay, S., Rijmen, F., **Choi, S. W.**, Dorans, N. J. (2014). The revised standards and its role in research on educational measurement. *Educational Measurement: Issues and Practice*, 33, 36-38.

Sinharay, S., Wan, P., Whitaker, M., Kim, D.-I., Zhang, L., & **Choi, S. W.** (2014). Determining the overall impact of interruptions during online testing. *Journal of Educational Measurement*, 51, 419-440.

Sinharay, S., Wan, P., **Choi, S. W.**, & Kim, D.-I. (2015). Assessing Individual-Level Impact of Interruptions During Online Testing. *Journal of Educational Measurement*, 52, 80-105.

Choi, S. W., & King, D. R. (2015). R package MAT: Simulation of multidimensional adaptive testing for dichotomous IRT models. *Applied Psychological Measurement*, 39, 239-240.

Kisala, P. A., Tulsky, D. S., Kirshblum, S. C., & **Choi, S. W.** (2015). Development and Psychometric Characteristics of the SCI-QOL Pressure Ulcers Scale and Short Form. *Journal of Spinal Cord Medicine*, 38, 303-314.

Kisala, P.A., Victorson, D., Pace, N., Heinemann, A.W., **Choi, S.W.**, & Tulsky, D. (2015). Measuring Psychological Trauma after Spinal Cord Injury: Development and Psychometric Characteristics of the SCI-QOL Psychological Trauma Item Bank and Short Form. *Journal of Spinal Cord Medicine*, 38, 326-334.

Tulsky, D. S, Kisala, P. A, Victorson, D, **Choi, S. W.**, Gershon, R, Heinemann, A. W, & Cella, D. (2015). SCI-QOL Methodology and Calibration of Item Banks to Measure Patient Reported Outcomes Following Spinal Cord Injury. *Journal of Spinal Cord Medicine*, 38, 366-376.

Kisala, P. A., Tulsky, D. S., Kalpakjian, C., Heinemann, A. W., Pohlig, R. T., Carle, A., & **Choi, S. W.** (2015). Measuring Anxiety after Spinal Cord Injury: Development and Psychometric Characteristics of the SCI-QOL Anxiety Item Bank and Linkage with GAD-7. *Journal of Spinal Cord Medicine*, 38, 315-325.

Kisala, P. A., Tulsky, D. S., Pace, N., Victorson, D., **Choi, S. W.**, & Heinemann, A. W. (2015). Development of a Stigma Item Bank for Individuals with Spinal Cord Injury. *Journal of Spinal Cord Medicine*, 38, 386-396.

Tulsky, D. S., Kisala, P. A., Victorson, D, Tate, D. G., Heinemann, A. W, Charlifue, S, Kirshblum, S. C., Fyfee, D, Gershon, R, Spungen, A. M., Bombardier, C. H., Dyson-Hudson, T. A., Amtmann, D., Kalpakjian, C., **Choi, S. W.**, Jette, A, Forchheimer, M., & Cella, D. (2015). Overview of the Spinal Cord Injury – Quality of Life (SCI-QOL) Measurement System. *Journal of Spinal Cord Medicine*, 38, 257-269.

Tulsky, D. S., Kisala, P. A., Kalpakjian, C., Bombardier, C. H., Pohlig, R. T., Heinemann, A.W., Carle, A., & **Choi, S. W.** (2015). Measuring Depression after Spinal Cord Injury: Development and Psychometric Characteristics of the SCI-QOL Depression Item Bank and Linkage with PHQ-9. *Journal of Spinal Cord Medicine*, 38, 335-346.

Victorson, D., Tulsky, D. S., Kisala, P. A., Kalpakjian, C., Weiland, B., & **Choi, S. W.** (2015). Measuring Resilience after Spinal Cord Injury: Development, Validation and Psychometric

Characteristics of the SCI-QOL Resilience Item Bank and Short Form. *Journal of Spinal Cord Medicine*, 38, 366-376.

Kushner, R. E., **Choi, S. W.**, & Burns, J. L. (2016). Development of a six-factor questionnaire for use in weight management counseling. *Patient Education and Counseling*. 99, 2018-2025.

Tulsky, D. S., Kisala, P. A., Victorson, D., Carlozzi, N., Bushnik, T., Sherer, M., **Choi, S. W.**, Heinemann, A. W., et. al. (2016). TBI-QOL: Development and calibration of item banks to measure patient reported outcomes following traumatic brain injury. *Journal Head Trauma Rehabilitation*, 31, 40-51.

Choi, S. W., Moellering, K., Li, J., & van der Linden, W. J. (2016). Optimal reassembly of shadow tests in CAT. *Applied Psychological Measurement*, 40, 469-485.

Cook, K. F., Kallen, M. A., Bombardier, C., Bamer, A. M., **Choi, S. W.**, Kim, J., Salem, R., & Amtmann, D. (2017). Do measures of depressive symptoms function differently in people with spinal cord injury versus primary care patients: the CES-D, PHQ-9, and PROMIS-D. *Quality of Life Research*, 26, 139-148.

Choi, S. W., & van der Linden, W. J. (2018). Ensuring content validity of patient-reported outcomes: a shadow-test approach to their adaptive measurement. *Quality of Life Research*, 27, 1683-1693.

Cella, D., **Choi, S. W.**, et. al. (2019). PROMIS® Health Profiles: Efficient short-form measures of seven health domains. *Value in Health*, 22, 537-544.

Capo-Lugó, C. E., Kisala, P. A., Boulton, A. J., **Choi, S. W.**, et. al. (2019). Measuring Self-Reported Physical Function in Individuals with TBI: Development of the TBI-QOL mobility & upper extremity item banks and short forms. *Journal of Head Trauma Rehabilitation*, 34, 340-352.

Boulton, A. J., Tyner, C. E., **Choi, S. W.**, et. al. (2019). Linking the GAD-7 and PHQ-9 to the TBI-QOL anxiety and depression item banks. *Journal of Head Trauma Rehabilitation*, 34, 353-363.

van der Linden, W. J., & **Choi, S. W.** (2019). Improving item-exposure control in adaptive testing. *Journal of Educational Measurement*. Online first: DOI: 10.1111/jedm.12254.

Slesinger, N. C., Yost, K. J., **Choi, S. W.**, & Hahn, E. A. (in press). Validation of a short form for Health LiTT. *Health Literacy Research and Practice*.

Ren, H., **Choi, S. W.**, & van der Linden, W. J. (in press). Bayesian adaptive testing with polytomous items. *Behaviormetrika*.

Book Chapters

Choi, S. W., & McCall, M. (2002). Linking bilingual mathematics assessments: A monolingual IRT Approach. In G. Tindal and T. Haladyna (Eds.), *Large-Scale Assessment Programs for All Students: Validity, Technical Adequacy, and Implementation Issues*. Mahwah, NJ: Lawrence Erlbaum Associates.

Boyd, A. M., Dodd, B. G., & **Choi, S. W.** (2010). Polytomous Models in Computerized Adaptive Testing. In M. Nering & R. Ostini (Eds.), *Handbook of Polytomous Item Response Theory Models: Development and Applications*. New York, NY: Taylor and Francis.

Choi, S. W. (2018). Firestar: Simulating Computerized Adaptive Testing. In W. J. van der Linden (Ed.), *Handbook of Item Response Theory*. Chapman and Hall/CRC.

Professional Activities

Review Board Member: Educational Measurement: Issues and Practices (2002-2004)
Ad-Hoc Proposal Reviewer: National Council on Measurement in Education
Ad-Hoc Proposal Reviewer: American Educational Research Association Ad-Hoc Proposal
Ad-Hoc Proposal Reviewer: National Science Foundation
Reviewer: Applied Psychological Measurement
Reviewer: Educational and Psychological Measurement
Reviewer: Quality of Life Research
Reviewer: Cancer
Reviewer: Assessment
Reviewer: Journal of Pediatric Psychology
Proposal Reviewer: National Science Foundation
Technical Advisory Committee Member: Tennessee Comprehensive Assessment Program (2006-2008, 2010-2011, 2019)

Past Research Support

AG-260-06-01 (Gershon) 10/1/06-9/30/11
National Institutes of Health Role: Psychometrician
NIH Toolbox for Assessment of Neurological and Behavioral Function
The primary objective of this project was to create a toolbox of brief measures for the assessment of neural function across diverse study designs and populations

R21 HD057473 (Jacobs) 09/01/08 – 12/31/10
National Institutes of Health Role: Site PI
Measuring Trust Across Cultures
The site PI's role in this project was to provide technical support and consultation to Dr. Jacob for use of the Talking Touchscreen technology for data collection and assessment of special populations.

1U5AR057943-01 (Gershon) 09/01/09 – 08/31/13
National Institutes of Health Role: Co-Investigator
PROMIS Technical Center
As the PROMIS Technology Center, we developed and improved Assessment Center, an online software application that allows a researcher to establish a study-specific website for data collection. We aided the network of PROMIS investigators in creating and using computer- based data collection systems. We also provided technical support and education for the broader scientific community about PROMIS and Assessment Center.

U54 AR057951-01 (Cella) 09/30/09 – 08/31/13
National Institutes of Health Role: Co-Investigator
NIH PROMIS Statistical Center (PSC)
The purpose of this center was to advise and educate members of the network on a range of quantitative research methods; develop and implement processes to ensure data quality; provide leadership in the development of PROMIS-approved translations of new and extant domains; assist in the development and implementation of protocols, provided consultation on research design, sample size, sampling plans and power estimates for item bank testing; and provide psychometric and statistical support for the network. The PSC served as the repository for all data collected across the PROMIS network, enabling central quality assurance of data and analysis integrity.

RC1CA146181-01 (Yang) 09/30/09 – 09/29/11

National Institutes of Health — Role: Co-Investigator

Defining Interoperability Standards for PRO Assessments

The aim of this proposal was to help define and validate the proposed interoperability standards, and serving as the liaison to the PROMIS community to endorse and promote the use of these standards.

U01 AR 052177-01 (Cella) — 09/30/04 – 07/31/10

NIH — Role: Co-Investigator

NIH PROMIS Statistical Coordinating Center

The goal of this project was to serve as a coordinating center for a NIH-Roadmap initiative, developing a dynamic internet-based computer adaptive testing system for the national PROMIS (Patient-Reported Outcomes Measurement Information System) network.

HHSN 2652004236-01C (Cella) — 9/30/04 – 12/31/09

National Institutes of Neurological Disorders and Stroke — Role: Co-Investigator

Quality of Life Outcomes in Neurological Disorders

The purpose of this contract was to create and refine item banks to develop a variety of QOL measurement tools for adult and pediatric populations with neurological disorders and stroke.

1R21DA025731-01 (Riley) — 05/01/09 – 04/30/10

National Institute on Drug Abuse — Role: Site PI

Computer Adaptive Testing Methods

The goal of this project was to develop a new CAT algorithm for a multidimensional IRT model.

NHLBI K23 Award (Ruo) — 04/01/07 – 03/31/12

National Institutes of Health — Role: Co-Investigator

Creation of a Rapid, Precise Computerized Tool to Assess Heart Failure Symptoms

In this project, Dr. Choi helped with the psychometric aspects of item bank creation and programming for computer adaptive tests. The project team also shared PROMIS item banks and data systems architecture.

1 U01 HL097894-01 (Powell) — 9/29/09 – 09/30/10

National Institutes of Health — Role: Co-Investigator

Research Coordination Unit (RCU) - Translating Basic Behavioral and Social Science Discoveries into Interventions

The RCU collaborated with the steering committee (SC) to determine which common

outcomes and sample descriptors will be collected by all sites. The RCU solicited and organize suggestions of instruments and physical evaluation methods from sites and NHLBI. The RCU worked with the steering committee and all sites to make the RCU website as helpful to all users as possible.

Agmnt 12/04/09 (Victorson) 12/04/09 – 12/04/10
Medical University of South Carolina- Centocor Role: Co-Investigator
MUSC -Sarcoidosis Eye Study
The objective of this project was to complete analysis of the sarcoidosis "eye issues" item bank and calibrated short form, including analyses of external validity measures.

U01AR052171-05 (Cella) 05/01/09 – 07/31/10
NIAM Role: Co-Investigator
Administrative Supplement to PROMIS
Under the leadership of Dr. Choi, the PROMIS physical function bank was updated to include the new and revised items, including their psychometric properties and screening questions. Dr. Choi also conducted psychometric analyses and assisted with manuscript writing related to the PROMIS data and item banks.

1RC4CA157236 (Cella) 09/01/11 – 08/30/14
NCI Role: Co-Investigator
PROrosetta Stone
Dr. Choi developed and applied methods to link the Patient-Reported Outcomes Measurement Information System (PROMIS) with other related instruments to expand the range of PRO assessment options within a common, standardized metric.

1U24OD023319-01 (Gershon & Cella) 06/01/18 – 08/31/19
NIH Role: Site PI
ECHO Pro Research Resources
Dr. Choi will develop routines and packages in the R statistical platform. These tools will be used by ECHO analysts to accelerate harmonization and instrument development tasks in ECHO. The first represents an extension of Firestar in order to simulate Rasch dichotomous Computer Adaptive Tests (CATs) and implement additional stopping rules for polytomous CATs.