

Academic Information

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Education and Training

1997-2001 Belmont University, Nashville, TN (BS, Psychology/Statistics)

2003-2005 Texas Christian University, Fort Worth, TX (MS, Experimental Psychology)

2006-2009 Texas Christian University, Fort Worth, TX (PhD, Experimental Psychology)

Academic Appointments

2012-2014 Adjunct Faculty, Department of Kinesiology, Texas Christian University, Fort Worth, TX

2017-Present Research Assistant Professor, Department of Orthopaedic Surgery, Vanderbilt University Medical Center, Nashville, TN

2018-Present Faculty Affiliate, Data Science Institute at Vanderbilt, Vanderbilt University, Nashville, TN

2019-Present Research Assistant Professor, Medicine, Health, and Society, Vanderbilt University, Nashville, TN

2019-Present Core Faculty, Vanderbilt Center for Musculoskeletal Research, Vanderbilt University, Nashville, TN

Other Employment

2004 – 2005 Lab Instructor/Teacher Assistant, Texas Christian University, Fort Worth, TX
 Department of Psychology

2005 – 2009 Research Coordinator, TCU Institute of Child Development, Fort Worth, TX

2008 – 2018 Statistician, Elite Research LLC, Carrollton, TX

2013 – 2016 Senior Statistical Consultant, Texas Woman's University, Denton TX

2015 – 2016 Statistical Research Specialist, Division of Research, Tennessee Department of
 January Mental Health and Substance Abuse Services, Nashville, TN

2016 – 2017 Biostatistician, Vanderbilt University Medical Center, Nashville, TN

Professional Organizations

1999-2000 Treasurer, Gamma Beta Phi, National Honor Society, Belmont University Chapter

1999-2000 President, Psi Chi, Belmont University Chapter

2000-2001 Vice President, Psi Chi, Belmont University Chapter

2008-Present Member, American Statistical Association

2012-Present Accredited Professional Statistician by American Statistical Association

2017-Present Member, American Psychological Association

2019-Present Member, American Psychometric Society

2020-Present Member, International Society for Quality-of-Life Research (ISOQOL)

2020-Present Member, PROMIS Health Organization (PHO)

Professional Activities

A. Intramural Activities (Vanderbilt University School of Medicine)

- 2018 Abstract Reviewer, Vanderbilt University Medical Center's 36th Annual Research Forum
- 2019 Review Committee, Vanderbilt University's Data Science Institute - Summer 2019 Research Program
- 2019 Seed Grant Reviewer, Vanderbilt Center for Musculoskeletal Research
- 2019 Member, Resident Research Committee, Department of Orthopaedic Surgery

B. Extramural Journal Reviewing Activities

- 2017-Present Ad hoc Reviewer, Health Education and Behavior
- 2019-Present Ad hoc Reviewer, BMC Musculoskeletal Disorders

C. Extramural Grant Reviewing Activities

- 2019-Present Scientific Reviewer, Army Medical Research and Materiel Command, Department of Defense (DOD)
- 2019-Present Scientific Reviewer, Precision Medicine and Health Disparities Collaborative

D. Awards and Recognition

- 1998 Psi Chi Research Poster Award, Savannah, GA
- 2001 Marie H. Means Outstanding Graduating Student in Psychology, Belmont University
- 2003 Green Honors Fellowship Recipient, Texas Christian University
- 2018 CSRS 2018: 2nd Place Resident/Fellow Research Award for "30-Day Preoperative Opioid Dosage Predicts 12-Month Satisfaction in Cervical Spine Surgery"
- 2018 NASS Annual Meeting: Resident and Fellow Research Award for "The Impact of Postoperative Physical Therapy on Patient-Reported Outcomes in Patients Undergoing Spine Surgery"
- 2019 Ann Doner Vaughan Kappa Delta Award for Clinical Research, American Academy of Orthopaedic Surgeons (AAOS) – PI Rick Wright

Teaching Activities

Graduate Courses at Texas Christian University

Class Title	Role	Credit Hours	Number Students	Number Lecture per year	Date
KINE 50970: Graduate Statistics (Developed Course)	Instructor	3	13	12	Spring 2012 & 2014

Publications and Presentations

A. Peer-Reviewed Original Journal Articles

1. Purvis K, Cross D, Kellermann G, Kellermann M, Huisman H, & **Pennings JS**. (2006). An experimental evaluation of targeted amino acid therapy with behaviorally at-risk children. *Journal of Alternative and Complementary Medicine*, 11, 591-593.
2. Purvis KB, Cross DR, & **Pennings JS**. (2007). International adoption of post-institutionalized children: Implications for school counselors. *Journal of School Counseling*, 5(22). Retrieved December 3, 2007, from. <http://www.jsc.montana.edu/articles/v5n22.pdf>

3. Purvis KB, Cross DR, & **Pennings JS**. (2009). Trust-Based Relational Intervention™: Interactive Principles for Adopted Children with Special Social-Emotional Needs. *Journal of Humanistic Counseling, Education & Development*, 49, 3-22.
4. Dietz T, Davis D, & **Pennings, JS**. (2012). Evaluating and Comparing the Efficacy of Three Group Therapies for Child Sexual Abuse: The Effect of Incorporating Animal Assisted Therapy, *Journal of Child Sexual Abuse*, 21(6), 665-683
5. Rus AV, Stativa E, **Pennings JS**, Cross DR, Ekas N, Purvis K, Parris SR. (2013). Severe Punishment of Children by Staff in Romanian Placement Centers for School-Aged Children: Effects of Child and Institutional Characteristics. *Child Abuse and Neglect*, 37(12) 1152-1162.
6. Stativa E, Rus AV, Suci N, **Pennings JS**, Butterfield ME, Wenyika R, & Webster R. (2014). Characteristics and prenatal care utilisation of Romanian pregnant women. *The European Journal of Contraception and Reproductive Health Care*, 19(3), 220-226.
7. McFarlane J, **Pennings J**, Symes L, Maddoux J, & Paulson R. (2014). Predicting Abused Women with Children Who Return to the Abuser: Development of a Risk Assessment Tool. *Journal of Threat Assessment and Management*, 1(4), 274-290
8. Fredland N, McFarlane J, Symes L, Gilroy H, Paulson R, Nava A, & **Pennings JS**. (2015). Connecting Partner Violence to Poor Functioning for Women and Children: Modeling Intergenerational Outcomes. *Journal of Family Violence*, 30(5), 555-566.
9. Alexander GK, Rollins K, Walker D, Wong L, & **Pennings J**. (2015). Yoga for self-care and burnout prevention among nurses. *Workplace Health & Safety*, 63(10), 462-470.
10. **Pennings J**, McFarlane J, Paulson R, Fredland N, Binder B, Koci A, Montalvo-Liendo N. (2015). Predicting Behavioral Dysfunctions of Youth Living in Violent Homes: A Rapid Assessment Triage Tool. *Journal of Applied Research on Children: Informing Policy for Children at Risk*, 6(1), Article 11.
11. Daniels G, Robinson JR, Walker C, **Pennings JS**, Anderson ST. (2015). Gastrointestinal Symptoms among African Americans Undergoing Hemodialysis. *Nephrology Nursing Journal*, 42(6), 539-548.
12. McFarlane J, **Pennings J**, Liu FQ, Gilroy H, Nava A, Maddoux J, Montalvo-Liendo N, Paulson R. (2016). Predicting abused women with children who return to a shelter: Development and use of a rapid assessment triage tool. *Violence Against Women*, 22(2), 189-205
13. Symes L, Maddoux J, McFarlane J, **Pennings J**. (2016). A risk assessment tool to predict sustained PTSD symptoms among women reporting abuse. *Journal of Women's Health*, 25(4), 340-347. doi:10.1089/jwh.2015.5287.
14. Fredland N, McFarlane J, Symes L, Maddoux J, **Pennings J**, Paulson R, Binder B & Gilroy H. (2016). Modeling the intergenerational impact of partner abuse on maternal and child function at 24 months post outreach: Implications for practice and policy. *Nursing Outlook*, 64(2), 156-169. doi:10.1016/j.outlook.2015.10.005
15. Stativa E, Rus AV, Stanescu A, **Pennings JS**, Parris SR & Wenyika R. (2016). Prevalence and Predictors of Anaemia in Romanian Infants 6-23 Months Old. *Journal of Public Health*, 38(3), e272-e281. doi:10.1093/pubmed/fdv145

16. Rhea DJ, Rivchun AP, & **Pennings J.** (2016). The Liink Project: Implementation of a Recess and Character Development Pilot Study with Grades K & 1 Children. *Texas Association of Health, Physical Education, Recreation, & Dance Journal (TAHPERD)*, 84(2), 14-17.
17. Rus A, Tomuletiu E, Parris S, **Pennings J**, Webster R. (2016). Comparisons of Emotional and Behavioral Problems Reported by Parents and Teachers in Three Ethnic Groups Living in Romania: A Pilot Study. *Review of Research and Social Intervention*, 55, 63-79.
18. Rus A, Stativa E, Butterfield M, **Pennings J**, Parris S, Burcea G, Wenyika R. (2018). Peer Exploitation: Findings from a Romanian Nationally Representative Sample of Children Living in Long-Term Residential Centres. *Child Abuse Review*, 27(1), 58-71. Doi:10.1002/car.2464.
19. Sivaganesan A, Zuckerman S, Khan I, Nian H, Harrell FE, **Pennings JS**, Harbaugh R, Foley KT, Bydon M, Asher AL, Devin CJ, Archer KR. (2018). Predictive Model for Medical and Surgical Readmissions Following Elective Lumbar Spine Surgery: A National Study of 33,674 Patients. *Spine*, 44(8), 588-600. doi:10.1097/brs.0000000000002883.
20. Asher AL, Devin CJ, Weisenthal BM, **Pennings J**, Khan I, Archer KR, Sivaganesan A, Chotai S, Bydon M, Nian H, Harrell FE, McGirt MJ, Pummaneni P, Bisson EF, Shaffrey C, Foley KT. (2019). Effect of Modified Japanese Orthopedic Association Severity Classifications on Satisfaction with Outcomes 12-months after Elective Surgery for Cervical Spine Myelopathy. *Spine*, 44(11), 801-808. doi: 10.1097/BRS.0000000000002946.
21. Hills JM, **Pennings JS**, Archer KR, Wick JB, Daryoush J, Butler M, Sivaganesan A, Khan I, Call R, Devin CJ. (2019). Preoperative Opioids and 1-year Patient Reported Outcomes After Spine Surgery. *Spine*, 44(12), 887-895. doi: 10.1097/BRS.0000000000002964
22. Oleisky ER, **Pennings JS**, Hills J, Sivaganesan A, Khan I, Call R, Devin CJ & Archer KR. (2019). Comparing different chronic preoperative opioid use definitions on outcomes after spine surgery. *The Spine Journal*, 19(6), 984-994. doi: 10.1016/j.spinee.2018.12.014
23. Dabija DI, **Pennings JS**, Archer KR, Ayers GD, Higgins LD, Kuhn JE, Baumgarten KM, Matzkin E, Jain NB. (2019). Which is the best outcome for rotator cuff tears? *Clinical Orthopaedics and Related Research*, 477(8), 1869-1878. doi: 10.1097/CORR.0000000000000800
24. **Pennings JS**, Devin CJ, Khan I, Bydon M, Asher AL, Archer KR. (2019). Prediction of Oswestry Disability Index (ODI) using a PROMIS-29 in a National Sample of Lumbar Spine Surgery Patients. *Quality of Life Research*, 28(10), 2839-2850. doi:10.1007/s11136-019-02223-8
25. Rodriguez-Buitrago A, Basem A, Okwumabua E, Enata N, Evans A, **Pennings J**, Karacay B, Rice MJ, Obremskey W. (2019). Hyperglycemia as a Risk Factor for Postoperative Early Wound Infection after Bicondylar Tibial Plateau Fractures: Determining a Predictive Model Based on Four Methods, *Injury*, 50(11), 2097-2102. doi: 10.1016/j.injury.2019.07.028
26. Khan I, Archer KR, Wanner JP, Bydon M, **Pennings JS**, Sivaganesan A, Knightly JJ, Foley KT, Bisson EF, Shaffrey C, McGirt MJ, Asher AL, Devin CJ. (2019). Trajectory of improvement in myelopathic symptoms from 3- to 12-months following surgery for degenerative cervical myelopathy. *Neurosurgery*, nyz325, <https://doi.org/10.1093/neuros/nyz325>
27. Rus, AV, Stativa E, Parris SR, **Pennings JS**, O'Hern Six B, Burcea G, Popa CO. (2019). Awareness of Same-Sex Relationships between Children in Romanian Long-Term Residential Centers. *Review of Research and Social Intervention*, 66, 6-21.

28. Evans P, **Pennings JS**, Samade R, Lovvorn HN, Martus JE. (2019). The Financial Burden of Musculoskeletal Firearm Injuries in Children with and without Concomitant Intra-Cavitary Injuries. *Journal of Pediatric Surgery*. Online ahead of print 9/27/2019. doi.org/10.1016/j.jpedsurg.2019.09.030
29. Coronado RA, Devin CJ, **Pennings J**, Aaronson OS, Haug CM, Van Hoy E, Vanston SW, Archer KR. (2019). Safety and Feasibility of an Early Telephone-Supported Home Exercise Program after Anterior Cervical Discectomy and Fusion: A Case Series. *Physiotherapy Theory and Practice*. Online ahead of print 10/30/2019. doi.org/10.1080/09593985.2019.1683921.
30. MARS Group. Predictors of clinical outcome following revision anterior cruciate ligament reconstruction. (2019). *Journal of Orthopaedic Research*. Online ahead of print 12/16/2019. doi.org/10.1002/jor.24562. (Pennings, JS part of MARS Group)
31. Rundell SD, **Pennings JS**, Nian H, Khan I, Asher AL, Devin CJ, Archer KR. (2019). Adding 3-month patient data improves prognostic models of 12-month disability, pain, and satisfaction after specific lumbar spine surgical procedures. *The Spine Journal*. Online ahead of print 12/19/2019. doi.org/10.1016/j.spinee.2019.12.010
32. Coronado RA, Devin CJ, **Pennings JS**, Vanston SW, Fenster DE, Hills J, Aaronson OS, Schwarz JP, Stephens BF, Archer KR. (2020). Early self-directed home exercise program after anterior cervical discectomy and fusion: A pilot study. *Spine*, 45(4), 217-225. doi: 10.1097/BRS.0000000000003239
33. Asher AM, Oleisky E, **Pennings J**, Khan I, Sivaganesan A, Devin CJ, Bydon M, Asher AL, Archer KR. (2020). Measuring Clinically Relevant Improvement After Lumbar Spine Surgery: Is It Time for Something New? *The Spine Journal*, Online ahead of print 1/28/2020. doi.org/10.1016/j.spinee.2020.01.010
34. Thraikill K, Bunn, RC; Uppuganti S, Ray P, Garrett K, Popescu I, **Pennings, JS**; Fowlkes JL, Nyman, JS. (2020). Genetic ablation of SGLT2 function in mice impairs tissue mineral density but does not affect fracture resistance of bone. *Bone*. Accepted for publication 1/24/2020.
35. Hills JM, Carlile CR, Archer KR, Call R, Devin CJ, **Pennings JS** (2020). Duration and dosage of opioids after spine surgery: implications on outcomes at 1 year. *Spine*. Online ahead of print 2/21/2020. doi: 10.1097/BRS.0000000000003446

B. Submitted Original Journal Articles

1. **Pennings JS**, Khan I, Davidson C, Freitag R, Bydon M, Asher AL, Devin CJ, Archer K. Using PROMIS-29 to Predict Neck Disability Index (NDI) Scores using a National Sample of Cervical Spine Surgery Patients. *The Spine Journal (TSJ)*. 2020. (revise and resubmit status)
2. Asher AL, Khalafallah AM, Mukherjee D, Alvi MA, Khan I, **Pennings JS**, Davidson CA, Archer KR, Moshel Y, Knightly J, Roguski M, Zacharia BE, Harbaugh RE, Kalkinis SN, Bydon M. Launching the Quality Outcomes Database (QOD) - Tumor Registry: Rationale, Development, and Pilot Data. *Neurosurgical Focus*. 2020. (revise and resubmit status)
3. Coronado RA, Ehde DM, **Pennings JS**, Vanston SW, Koyama T, Phillips SE, Mathis SL, McGirt MJ, Spengler DM, Aaronson OS, Cheng JS, Devin CJ, Wegner ST, Archer KR. Psychosocial Mechanisms of Cognitive-Behavioral-Based Physical Therapy Outcomes after Spine Surgery: Preliminary Findings from Mediation Analyses. *Physical Therapy (PTJ)*. 2020. (revise and resubmit status)

4. Khan I, Archer KR, Bydon M, Sivaganesan A, **Pennings JS**, Alvi MA, Shaffrey CI, Foley KT, Bisson E, Knightly JJ, Asher AL, Devin CJ, QOD Vanguard Sites. Cervical Disc Arthroplasty Vs. Anterior Cervical Discectomy and Fusion: An analysis from the Quality Outcomes Database (QOD). *The Spine Journal (TSJ)*. 2020.
5. Master H, **Pennings JS**, Coronado RA, Henry AL, O'Brien MT, Haug CM, Skolasky RL, Riley LH, Neuman BJ, Cheng JS, Aaronson OS, Devin CJ, Wegner S, Archer KR. Physical performance tests provide distinct information in both predicting and assessing clinical outcomes following lumbar spine surgery. *Spine*. 2020.
6. Sivaganesan A, Khan I, **Pennings JS**, Roth SG, Nolan E, Asher AL, Bydon M, Devin CJ, Archer KR. Why are Patients Dissatisfied after Spine Surgery when Improvements in Disability and Pain are Clinically Meaningful? *The Spine Journal (TSJ)*. 2020.
7. Hovis JP, Ahlers C, Dilbone E, **Pennings JS**, Henry A, Gauger E, Desai MJ, Lee DH. Efficacy of Utilizing 3D Printed Models for Preoperative Surgical Planning of Open Reduction, Internal Fixation of Distal Humerus Fractures. *Journal of Hand Surgery*. 2020.
8. Horvis JP, **Pennings JS**, Davidson C, Weikert D, Lee D. 2+ Year Outcomes of ExploR® Modular Radial Head Arthroplasty for Radial Head Fracture. *Journal of Hand Surgery*. 2020. (revise & resubmit status)

C. Book Chapters and Review Articles

1. Stativa E, Rus AV, Parris SR, **Pennings JS**, Clocotici O. (2017). Institutional Neglect in Romania's Long-Term Residential Centers in the 1990s from the Perspective of Children's Rights. In: Rus A, Parris S, Stativa E. (eds) *Child Maltreatment in Residential Care* (pp. 27-60). Springer, Cham.
2. Rus AV, Stativa E, Parris SR, **Pennings JS**, Butterfield ME, Lee WC, Gavrilovici O. (2017). Punishment, Peer Exploitation, and Sexual Abuse in Long-Term Romanian Residential Centers: Findings from a Nationally Representative Sample of Institutionalized Children. In: Rus A, Parris S, Stativa E. (eds) *Child Maltreatment in Residential Care* (pp. 61-86). Springer, Cham.
3. Rus AV, Stativa E, Parris SR, **Pennings JS**, Tibu F, Wenyika R, Burcea G. (2017). Academic Achievement of Romanian Institutionalized Children: A Social–Ecological Approach. In: Rus A, Parris S, Stativa E. (eds) *Child Maltreatment in Residential Care* (pp. 87-110). Springer, Cham.
4. Stativa E, Rus AV, Parris SR, **Pennings JS**, Simion B, Wenyika R. (2017). The Prevalence of Stunting Among the Romanian Institutionalized Children Placed in Long-Term Institutional Settings in the 1990s. In: Rus A, Parris S, Stativa E. (eds) *Child Maltreatment in Residential Care* (pp. 111-128). Springer, Cham.
5. Griffith DM, **Pennings JS**, Bruce MA, Ayers, GD. (2019). Measuring the dimensions of African American Manhood: A factor analysis. In Griffith DM, Bruce MA, Thorpe Jr RJ. (Eds.), *Men's Health Equity: A Handbook*. New York, NY: Routledge.

D. Peer Reviewed Oral Presentations: Regional and National

1. Brummett R, **Pennings JS**, Petersen J, Wilson J, Conway N, Brinkmeyer B, & Workman M. *A psychometric evaluation of the Belmont Perfectionism Scale (BPS)*. 46th Annual Meeting of Southeastern Psychological Association, Atlanta, GA, March 21-24, 2000.

2. **Pennings JS.** *Couple interactions and child outcomes in special needs adoption.* Annual Psi Chi Convention, Texas Christian University, Fort Worth, TX, February 2004.
3. Alexander GK, Rollins K, Walker D, Wong L, & **Pennings J.** *Efficacy of yoga to improve self-care and reduce burnout among nurses.* Podium presentation, 29th Annual Conference of Southern Nursing Research Society (SNRS), Tampa, FL, February 25-28, 2015.
4. Archer KR, Skolasky RL, Coronado RA, Haug C, **Pennings JS**, Vanston S, Riley III LH, Neuman BJ, Cheng JS, Aaronson OS, Devin CJ, Wegener S. (September 2018). *Is a physical therapist-delivered cognitive-behavioral intervention effective for improving surgical spine outcomes?* NASS 2018 Annual Meeting, Los Angeles, CA, September 27, 2018. **Abstract published Spine Journal, 2018; 18:S60.**
5. Archer KR, Maybin S, Khan I, **Pennings J**, Chotai S, Coronado R, Devin CJ. (September, 2018). *The Impact of Postoperative Physical Therapy on Patient-Reported Outcomes in Patients Undergoing Spine Surgery.* North American Spine Society 33rd Annual Meeting. Los Angeles, CA, September 28, 2018. **Selected for Resident and Fellow Research Award. Abstract published Spine Journal 2018;18(8):S72.**
6. Hills J, Wick J, **Pennings JS**, Khan I, Sivaganesan A, Archer KR, Devin CJ. *30-Day Preoperative Opioid Dosage Predicts 12-Months Satisfaction in Cervical Spine Surgery.* Cervical Spine Research Society 46th Annual Meeting, Scottsdale, AZ, December 7, 2018. **Selected for 2nd Place Resident Research Award.**
7. Weisenthal B, Sivaganesan A, Chotai S, Khan I, Nian H, Harrell FE, Archer KR, **Pennings J**, Bydon M, Mummaneni PV, Asher AL, Foley KT, Devin CJ. *Effect of Modified Japanese Orthopedic Association Scores on Satisfaction with Outcomes 12 Months After Elective Surgery for Cervical Spine Myelopathy.* Cervical Spine Research Society 46th Annual Meeting, Scottsdale, AZ, December 8, 2018.
8. Archer KR, Coronado R, Skolasky R, Haug C, **Pennings J**, Vanston S, Riley L, Neuman B, Cheng J, Aaronson O, Devin C, Wegener WT. *Psychologically Informed Physical Therapy for Patients Following Lumbar Spine Surgery: A Randomized Clinical Trial.* American Physical Therapy Association: Combined Sections Meeting. Washington, DC, January 24, 2019. **Abstract published in J Orthop Sports Phys Ther 2019;49(1):CSM5-CSM6.**
9. Coronado R, Sklasky R, Haug C, **Pennings J**, Vanston S, Riley L, Neuman B, Cheng J, Aaronson O, Devin C, Wegener WT Archer KR. *Prognostic and Moderating Role of Resilience and Risk Factors in Patients Receiving a Cognitive-Behavioral Based Physical Therapy Intervention After Lumbar Spine Surgery.* American Physical Therapy Association: Combined Sections Meeting. Washington, DC, January 24, 2019. **Abstract published in J Orthop Sports Phys Ther, 2019; 49(1):CSM84.**
10. Khan I, Archer KR, Wanner JP, Bydon M, **Pennings JS**, Sivagansean A, Asher AL, Devin CJ. *Trajectory of Improvement in Myelopathic Symptoms from 3- to 12-Months Following Surgery for Degenerative Cervical Myelopathy.* Southern Neurological Society 70th Annual Meeting. Key Largo, FL, February 21, 2019.
11. Khan I, **Pennings J**, Sivaganesan A, Asher AL, Bydon M, Archer KR, Devin CJ. *Does the Mode of Administration Matter for Satisfaction with Outcomes in Lumbar Spine Surgery? A Comparison Study of 32,014 Patients from National Scale Registry.* Lumbar Spine Research

Society (LSRS) 12th Annual Meeting, Chicago, IL, April 5, 2019. **Abstract published Journal of Neurosurgery 2019;30(4):40.**

12. Khan I, Hills J, Wick J, **Pennings JS**, Khan I, Sivaganesan A, Archer KR, Devin CJ. *Preoperative and 1-Year Patient Reported Outcomes after Spine Surgery*. American Association of Neurological Surgeons Annual Scientific Meeting, San Diego, CA, April 15, 2019. **Abstract published Journal of Neurosurgery 2019;13(1):27.**
13. **Pennings JS**, Devin CJ, Archer KR. *PROMIS-29 Validity and Conversion Equation to Oswestry Disability Index (ODI) Using a National Sample of Lumbar Spine Surgery Patients*. NASS 2019 Summer Spine Meeting, Honolulu, HI, August 1, 2019.
14. **Pennings JS**, Khan I, Devin CJ, Archer KR. *Correlations Among PROMIS-29 Domains Before and After Lumbar Spine*. NASS 2019 Summer Spine Meeting, Honolulu, HI, August 1, 2019.
15. Carlile C, Hills J, Devin CJ, Archer KR, **Pennings JS**. (September 2019). *Postoperative Opioids and 1-year Outcomes After Spine Surgery*. North American Spine Society 34th Annual Meeting, Chicago, IL, September 25, 2019. **Abstract published The Spine Journal 2019;19(9):s40-41.**
16. Archer KR, Oleisky, ER, **Pennings, JS**, Khan, I, Sivaganesan, A, Coronado, RA, Wanner, JP, Verhotz, DR, Devin, CJ. *Does postoperative physical therapy improve patient-reported outcomes at one-year following cervical spine surgery?* North American Spine Society 34th Annual Meeting, Chicago, IL, September 27, 2019. **Abstract published The Spine Journal 2019;19(9):s114-s115.**
17. Khan I, Archer KR, Wanner JP, Bydon M, **Pennings JS**, Sivaganesan A, Devin CJ. *Trajectory of Change in mJOA Score Within 1-Year Following Surgery for Degenerative Cervical Myelopathy*. North American Spine Society 34th Annual Meeting, Chicago, IL, September 25, 2019. **Abstract published The Spine Journal 2019;19(9):s22-s23.**
18. Khan I, Devin CJ, Harrell FE, **Pennings JS**, Bydon M, Sivaganesan A, Nian H, Archer KR. *Predicting disability and pain outcomes one-year after elective surgery for degenerative cervical diseases: analysis from quality outcomes database*. North American Spine Society 34th Annual Meeting, Chicago, IL, September 25, 2019. **Abstract published The Spine Journal 2019;19(9):s6.**
19. Coronado RA, Henry A, **Pennings JS**, Haug C, Vanston S, Skolasky RL, Riley LH, Neuman BJ, Cheng JS, Aaronson O, Devin CJ, Wegener S, Archer KR. *Resilience and self-efficacy are protective psychological factors for 12 month outcomes after lumbar spine surgery*. North American Spine Society 34th Annual Meeting, Chicago, IL, September 25, 2019. **Abstract published The Spine Journal 2019;19(9):s28-s29.**
20. Khan I, **Pennings JS**, Sivaganesan A, Devin CJ, Archer KR. *PROMIS-29 Validity and Conversion Equation to Neck Disability Index (NDI) using a National Sample of Cervical Spine Surgery Patients*. Congress of Neurological Surgeons Annual Meeting. San Francisco, CA. October 22, 2019. **Abstract published Neurosurgery 2019;66(Supplement1):nyz310_331.**
21. Griffith DM, **Pennings J**, Bruce MA. (November, 2019). *What Demographic characteristics and aspects of manhood are most associated with middle-aged and older African American men's self-rated health?* APHA 2019, Philadelphia, PA, November 5, 2019.

22. Archer KR, Oleisky E, **Pennings JS**, Khan I, Coronado R, Devin CJ. *The Impact of Postoperative Physical Therapy on Patient-Reported Outcomes at 1-Year After Cervical Spine Surgery*. Cervical Spine Research Society's 47th Annual Meeting. New York, NY, November 22, 2019.
23. Sivaganesan A, Khan I, Nian H, Harrell F Jr, **Pennings JS**, Bydon M, Asher AL, Archer KR, Devin CJ. *Can We Predict A Patient's Arm Pain, Neck Pain, And Disability Level One Year After Cervical Spine Surgery for Radiculopathy?* Cervical Spine Research Society's 47th Annual Meeting. New York, NY, November 22, 2019.
24. Sivaganesan A, Khan I, Nian H, Harrell F Jr, **Pennings JS**, Bydon M, Asher AL, Archer KR, Devin CJ. *Predictive Models for Long-Term Patient-Reported Outcomes After Cervical Spine Surgery for Myelopathy: A National Study Of 2717 Patients*. Cervical Spine Research Society's 47th Annual Meeting. New York, NY, November 23, 2019.
25. Coronado RA, O'Brien M, Henry A, **Pennings J**, Vanston SW, Wegner S, Archer K. Influence of Goal Attainment Scaling on Cognitive-Behavioral Based Physical Therapy Outcomes. APTA 2020 Combined Sections Meeting. Denver, CO, February 12-15, 2020.

E. Peer-Reviewed Oral Presentation: International

1. Archer KR, Maybin S, Khan, I, **Pennings J**, Chotai S, Coronado R, Devin CJ. *The Impact of Postoperative Physical Therapy on Patient-Reported Outcomes in Patients Undergoing Spine Surgery*. International Society for the Study of the Lumbar Spine (ISSLS) 45th Annual Meeting. Banff, Canada, May 16, 2018. Published abstract, *The Spine Journal*, 2018; 18:S60.
2. Coronado RA, Henry A, **Pennings JS**, Haug C, Vanston S, Skolasky RL, Riley L, Neuman B, Cheng J, Aaronson O, Devin C, Wegener S, Archer K. *Prognostic and moderating role of resilience and risk factors in patients receiving a cognitive-behavioral-based physical therapy intervention after lumbar spine surgery*. World Congress of Physical Therapy, Geneva, Switzerland, May 12, 2019.
3. Archer, KR, Skolasky RL, Coronado RA, Haug CM, **Pennings JS**, Vanston SW, Riley III LH, Neuman BJ, Cheng JS, Aaronson OS, Devin CJ, Wegener, ST (June 2019). *Psychologically Informed Physical Therapy for Patients Following Lumbar Spine Surgery: A Randomized Clinical Trial*. International Society for the Study of the Lumbar Spine (ISSLS) 46th Annual Meeting. Kyoto, Japan, June 4, 2019.
4. Coronado R, Archer KR, **Pennings JS**, Henry MT, O'Brien MT, Skolasky RL, Haug CM, Riley III LH, Newman BJ, Cheng JS, Aaronson, OS, Devin CJ, Wegener ST. *Performance-Based Tests as Predictors of Patient-Reported Outcomes at 1-Year Following Lumbar Spine Surgery*. International Society for the Study of the Lumbar Spine (ISSLS) 46th Annual Meeting. Kyoto, Japan, June 4, 2019.
5. Archer, KR, Oleisky ER, **Pennings JS**, Hills J, Sivaganesan A, Khan I, Call R, Devin C. *Comparing Different Chronic Preoperative Opioid Use Definitions on Outcomes after Spine Surgery*. International Society for the Study of the Lumbar Spine (ISSLS) 46th Annual Meeting. Kyoto, Japan, June 4, 2019.
6. **Pennings JS**, Coronado RA, Master H, Wegener ST, Archer KR. *Trajectories of PROMIS Physical Function, Pain Interference, and Participation in Social Roles in 24 Months Following Lumbar Spine Surgery*. SpineWeek 2020: North American Spine Society program, Melbourne, Australia, April 27 – May 1, 2020.

7. Coronado RA, **Pennings JS**, Hills JM, Khan I, Call R, Sivaganesan A, Devin CJ, Archer KR. *Postoperative outpatient physical therapy and opioid utilization after spine surgery*. SpineWeek 2020: North American Spine Society program, Melbourne, Australia, April 27 – May 1, 2020.
8. Coronado RA, Robinette PE, O'Brien M, Sterling E, Henry AL, **Pennings JS**, Vanston SW, Wegener ST, Archer KR. *Influence of goal attainment scaling on cognitive-behavioral based physical therapy outcomes after lumbar spine surgery*. SpineWeek 2020: North American Spine Society program, Melbourne, Australia, April 27 – May 1, 2020.
9. Rundell S, **Pennings J**, Nian H, Harrell F, Khan I, Bydon M, Asher A, Devin C, Archer K. *Adding 3-month patient data improves prognostic models of 12-month disability, pain, and satisfaction after lumbar spine surgery*. SpineWeek 2020: North American Spine Society program, Melbourne, Australia, April 27 – May 1, 2020.
10. Archer K, **Pennings J**, Sivaganesan A, Roth S, Nolan E, Khan I, Asher A, Bydon M, Devin C. *Why are patients dissatisfied after spine surgery when reductions in disability or pain are clinically meaningful?* Spine Week: International Society for the Study of the Lumbar Spine (ISSLS) 46th Annual Meeting, Melbourne, Australia, April 27 – May 1, 2020.

F. Peer Reviewed Poster Presentations

1. **Pennings JS**, Hamilton BL, & Jackson J. *The relationship among self-schema, dieting intentions, dieting behaviors, and behavioral control*. Annual meeting of Southeastern Psychological Association, Savannah, GA, March, 1999.
2. **Pennings JS**, Pearson C, Yandell L. *The effects of familiar and unfamiliar melodies on semantic, rhyming, and spatial tasks*. Annual National Conference of Undergraduate Research, Missoula, MT, April, 2000.
3. Brummett R, **Pennings JS**, & Bailey W. *Relationships among perfectionism, achievement striving, and personal responsibility*. Annual meeting of the American Psychological Association, San Francisco, CA, August, 2001.
4. Purvis K, Kellermann G, Cross D, Kellermann M, Huisman H, & **Pennings JS**. *An Experimental Evaluation of Targeted Amino Acid Theraplay with At-Risk Children*. Natural Supplements: An Evidence-Based Update Conference, La Jolla, CA, January, 2006.
5. **Pennings JS**, Kolb H, Hawkins J. *Behavior problems in internationally adopted children*. Annual meeting of the Society for Research in Human Development, Fort Worth, TX, April 2006.
6. Howard AR, **Pennings JS**, Cross DR, McKenzie LB, Purvis KB. *A Preliminary Evaluation of the Beech Brook Attachment Disorder Checklist*. Society for Research in Child Development, Denver, CO, April 2, 2009.
7. Rus AV, **Pennings JS**, Kellerman G, Cross DR, Purvis KB. *Profiles of Romanian Infants and Toddlers*. Society for Research in Child Development, Denver, CO, April 2, 2009.
8. McFarlane J, **Pennings J**, Liu F, Gilroy H, Nava A, Maddoux J, Montalvo-Liendo N, Paulson R. *Predicting Abused Women with Children who Return to Shelter: Development and Use of a Rapid Assessment Triage Tool*. Poster presented at Southern Nursing Research Society 28th Annual Conference, San Antonio, Texas, February 12-15, 2014.

9. Butterfield ME, Rus AV, Stativa E, **Pennings JS**, Burcea G, Wenyika R, Rookard G. *Secrecy and adult legitimization predict bullying in Romanian institutionalized children*. 94th annual meeting of the Western Psychological Association, Portland, OR, April 25, 2014.
10. **Pennings JS**, Abraham CM, Clemons L, Vanston S, Jackson JC, Ely EW, Guillamondegui O, Obremskey W, Archer KR. *Goal management training and mindfulness for patients with mild traumatic brain injury: A randomized controlled trial*. Annual Meeting of American Psychological Association, San Francisco, CA, August 9, 2018.
11. Maybin S, **Pennings J**, Archer K. The impact of postoperative physical therapy on patient-reported outcomes in patients undergoing spine surgery. 2018 AAPM&R Annual Assembly, Orlando, FL, October 26, 2018. **Abstract published in The Journal of PM&R, 2018; 10(9S1):S41.**
12. Coronado RA, Devin CJ, **Pennings JS**, Vanston SW, Fenster DE, Hills J, Aaronson O, Schwarz JP, Stephens BF, Archer KR. Safety and Efficacy of an Early Exercise Program after Anterior Cervical Discectomy and Fusion: A Pilot Randomized Controlled Trial. Cervical Spine Research Society 46th Annual Meeting, Scottsdale, AZ, December 8, 2018.
13. Coronado R, Devin C, **Pennings J**, Fenster D, Vanston S, Hills J, Aaronson O, Schwarz J, Stephens B, Archer K. *The Safety and Efficacy of an Early Physical Therapist-Delivered, Telephone-Based Home Exercise Program after Anterior Cervical Discectomy and Fusion: A Randomized Controlled Trial*. American Physical Therapy Association: Combined Sections Meeting, January 26, 2019. Washington, DC. Abstract published in J Orthop Sports Phys Ther, 2019; 49(1):CSM10
14. Archer KR, Asher AM, **Pennings JS**, Khan I, Sivagansean A, Bydon M, Devin CJ, Asher AL. (September 2019). *Clinically relevant percent reduction (CRPR): a new definition of clinically significant change for lumbar spine surgery*. North American Spine Society 34th Annual Meeting. Chicago, IL, September 26, 2019. **Abstract published The Spine Journal 2019;19(9):s222.**
15. **Pennings JS**, Coronado, RC, Hills JM, Khan I, Call R, Sivaganesan A, Devin CJ, Archer KR. *Classifying Chronic Opioid Use Before Spine Surgery: Comparison of Self-Report and Controlled Substance Monitoring Database (CSMD) Reporting*. 2019 Vanderbilt Translational Research Forum. Nashville, TN, October 4, 2019.
16. **Pennings JS**, Hills JM, Carlile CR, Archer KR, Wick JB, Butler M, Daryoush J, Khan I, Call R, Devin CJ. Duration and Dosage of Opioids after Spine Surgery: Implications on Outcomes at 1 Year. 2019 Vanderbilt Translational Research Forum. Nashville, TN, October 4, 2019.
17. Master H, Coronado RA, **Pennings JS**, Henry AL, O'Brien MT, Skolasky RL, Haug CM, Riley III LH, Neuman BJ, Cheng JS, Aaronson OS, Devin CJ, Wegener ST, Archer KR. Performance-Based Tests as Predictors of Patient-Reported Outcomes at 1-Year Following Lumbar Spine Surgery. 2019 Vanderbilt Translational Research Forum. Nashville, TN, October 4, 2019.
18. Coronado R, **Pennings JS**, Hills JM, Khan I, Call R, Sivaganesan A, Devin CJ, Archer KR. Postoperative Outpatient Physical Therapy Does Not Attenuate Opioid Utilization after Spine Surgery. 2019 Vanderbilt Translational Research Forum. Nashville, TN, October 4, 2019.

19. Archer KR, **Pennings JS**, Khan I, Asher AM, Asher AL, Devin CJ. *Defining Clinically Relevant Improvement for Patients Following Cervical Spine Surgery: Percent Reduction vs. MCID*. Cervical Spine Research Society's 47th Annual Meeting. New York, NY, November 21, 2019.
20. **Pennings J**, Davidson CA, Khan I, Bydon M, Asher AL, Devin CJ, Wanner JP, Verhotz D, Archer KR. *Promis-29 Validity and Conversion Equation to Neck Disability Index (NDI) Using A National Sample of Cervical Spine Surgery Patients*. Cervical Spine Research Society's 47th Annual Meeting. New York, NY, November 21, 2019.
21. **Pennings JS**, Davidson CA, Khan I, Bydon M, Asher A, Wanner JP, Verhotz D, Devin CJ, Archer K. *Correlations Among PROMIS-29 Domains Before and After Cervical Spine Surgery*. Cervical Spine Research Society's 47th Annual Meeting. New York, NY, November 21, 2019.
22. Schwartz HS, Norris JP, Henry AL, **Pennings JS**, Halpern JL. *Caveat Herniorrhaphy: Preventing Inadvertent Sarcoma Resections*. American College of Surgeons, San Francisco, CA, October 29, 2019. **Abstract published Journal of the American College of Surgeons 2019;229(4S2):e197.**
23. **Pennings JS**, Davidson C, Khan I, Devin CJ, Archer KR. Using PROMIS-29 to predict Neck Disability (NDI) scores using a national sample of cervical spine surgery patients. SpineWeek 2020: North American Spine Society program, Melbourne, Australia, April 27 – May 1, 2020.

G. Invited Peer-Reviewed Symposiums

1. **Pennings JS**. *Statistical Practice without Borders: Consulting Opportunities and Challenges to Overcome in Developing Countries*. Topic contributed panel Statistics without Borders presented at Joint Statistical Meetings (JSM), Montreal, Quebec, August, 2013.
2. **Pennings J**. *The First Self-Administered Survey in North Korea: A Glimpse of Self-Esteem of North Koreans Compared with Peers in 53 Other Countries*. Topic contributed panel Statistics without Borders presented at Joint Statistical Meetings (JSM), Chicago, IL, July 31, 2016

H. Invited Seminars/Lectures

1. Paulson RM & **Pennings JS**. *Importance of Statistics, Use of Statistics in Nonprofits, and Statistical Tricks and Traps*. Presented at the Global Research Workshop at OneHope, Pompano Beach, FL, December 12, 2008.
2. **Pennings JS**. *The Effects of a Touch Intervention on Nurturing Touch, Family Functioning, and Child Behavior*. Paper presented at the Families of Russian and Ukrainian Adoption Conference, Fort Worth, TX, April, 2009.
3. **Pennings JS**. *Summer Intern Training for Data Cleaning and Statistical Analysis*. Elite Research, Carrollton, TX, June-August, 2010.
4. **Pennings JS**, Paulson RM. *Statistics Using SPSS and Computing Effect Sizes*. Seminar presented at University of North Texas, Denton, TX, February 18, 2011.
5. **Pennings JS** & Paulson RM. *SPSS and Statistics Training Series - Beginner, Intermediate, and Advanced*. Daily training course (12 hrs./week) held in Carrollton, TX, April 4-21, 2011.
6. **Pennings JS**. *Intern Training for Data Cleaning and Statistical Analysis*. Elite Research, Carrollton, TX, June-August, 2011.

7. **Pennings J** & Allard L. *Pregnant Women and Substance Abuse Treatment in Tennessee*. Presented to TDMHSAS Planning and Policy Council Children's Committee. Nashville, TN, March 23, 2015.
 8. **Pennings J**. *Pattern of treatment admissions over time by substance of abuse and age cohort: 1992-2012*. Presented to State Epidemiological Outcomes Workgroup and TDMHSAS Coalitions. Nashville, TN, June 5, 2015.
 9. **Pennings J**. *Suggested Heroin Indicators: 2015, Recommendations from the State Epidemiological Outcomes Workgroup*. Presentation to the State Heroin Working Group. Nashville, TN, December 17, 2015.
- I. Invited Seminars/Lectures: International**
1. Paulson RM & **Pennings JS**. *Structural Equation Modeling with Amos and Lisrel*. Seminar for Global Network for Environment and Economic Development Research, Ibadan, Nigeria, May 18, 2009.
 2. Paulson RM & **Pennings JS**. *Choosing Appropriate Research Design and Statistical Analysis*. Workshops presented at Daystar University and Pan Africa Christian University (PACU), Nairobi, Kenya, May 13-14, 2009.
 3. **Pennings JS** & Paulson RM. *Research Design and Methods for Non-Profit Research*. Workshops presented at Scripture Union, Accra, Ghana (May 19, 2009) and One Hope, Mbabane, Swaziland (May 21, 2009).
- J. Seminars at Vanderbilt University**
1. **Pennings JS**. *Tips and Tricks for Statistical Collaboration*. VOI Research Committee, Vanderbilt University Medical Center, Nashville, TN, March 21, 2018.
 2. **Pennings JS**. *Tips and Tricks for Statistical Collaboration*. Clinical/Translational Research Staff Council, Vanderbilt University Medical Center, Nashville, TN, April 18, 2018.
 3. **Pennings JS**. *Tips for Statistical Collaboration*. Vanderbilt School of Medicine, Department of Orthopaedic Surgery, Grand Rounds, August 31, 2018.
 4. **Pennings JS** & Coronado RA. *A Gentle Introduction to Common Statistical Testing*. VOI Research Committee, Vanderbilt University Medical Center, Nashville, TN, July 17, 2019.
 5. **Pennings JS**. *Creating and Designing a Survey: Best and Bad Practices*. Vanderbilt Center for Health Services Research: Works in Progress, November 26, 2019.
 6. **Pennings JS**. Resident Research Boot Camp: Variable Types, Sample Size, Missing Data. Department of Orthopaedic Surgery, Resident Boot Camp, February 19, 2020.