

Haeyong Chun

Ph.D., Kinesiology

haeyong@cnu.ac.kr · [Webpage](#) · github.com/haeyong520 · [LinkedIn](#)

RESEARCH INTERESTS

My research advances and applies **psychometric methodology** to solve critical measurement challenges in health research. I specialize in factor analysis with ordered categorical indicators, measurement invariance, and Monte Carlo simulation to evaluate factor enumeration and scoring approaches. A complementary mission develops **computational psychometrics and physical-activity intervention models** leveraging AI—including LLM-based persona generation—to improve measurement quality and enable scalable, personalized behavior change support.

Core areas: Psychometric Methodology · Physical Activity Interventions · Monte Carlo Simulation · Structural Equation Modeling · LLM-Based Computational Psychometrics · Population Health Analytics

ACADEMIC POSITIONS

2026–
Present **Chungnam National University (CNU)**, South Korea
Research Assistant Professor, Department of Sports Science

EDUCATION

2021–
Present **Michigan State University (MSU)**, East Lansing, MI
Ph.D., Kinesiology · Concentration: Psychosocial Aspects of Sport & Physical Activity
Advisor: Dr. Nicholas D. Myers

2025–
Present **Michigan State University (MSU)**
Sports Analytics Graduate Certificate

2018–2020 **Chungnam National University (CNU)**, South Korea
Master of Sport Science · Concentration: Sports and Exercise Psychology
Thesis: Development of Athlete's Emotional Regulation Questionnaire

2011–2018 **Chungnam National University**, South Korea — Dual Major
Bachelor of Mathematics Education; Bachelor of Sport Science

TECHNICAL SKILLS

Languages	R (primary), Python, SQL
Statistical Software	Mplus, SPSS, Microsoft Excel
Analytics & Modeling	Structural Equation Modeling, Factor Analysis, Monte Carlo Simulation, Multilevel Modeling, Longitudinal Analysis, LLM-Based Persona Generation & Simulation

LLM Tools	Ollama, Prompt Engineering, JSON Schema Enforcement
Data Engineering	pandas, numpy, openpyxl, ETL pipelines, ThreadPoolExecutor parallelism
Version Control	Git, GitHub
Visualization	ggplot2 (R), matplotlib/seaborn (Python), R Shiny (introductory)

PUBLICATIONS

Peer-Reviewed Publications

1. Myers, N. D., **Chun, H.**, & Lee, S. (2026). Determining the Internal Structure of Responses to a Physical Activity Self-Efficacy (PASE) Scale Under a Latent Variable Approach: A Monte Carlo Study. *Measurement in Physical Education and Exercise Science*, 1–17. <https://doi.org/10.1080/1091367X.2026.2649843>
2. **Chun, H.**, Myers, N.D., Pacewicz, C.E., Malet, L., Prilleltensky, I., & Lee, S. (2025). Two-dimensional latent physical activity self-efficacy and its relationships with physical activity: A secondary data analysis. *Measurement in Physical Education and Exercise Science*, 1–16.
3. Pacewicz, C.E., Hill, C.R., **Chun, H.**, & Myers, N.D. (2024). Confirmatory factor analysis in physical education and exercise science: A review with recommendations. *Measurement in Physical Education and Exercise Science*, 28(2), 1–26. <https://doi.org/10.1080/1091367X.2023.2270466>
4. Myers, N.D., Pacewicz, C.E., Hill, C.R., & **Chun, H.** (2023). Factor analysis with ordered categorical indicators and measurement of self-efficacy in physical activity contexts. *Measurement in Physical Education and Exercise Science*, 27(4), 1–20. <https://doi.org/10.1080/1091367X.2023.2186789>
5. Lee, S., Myers, N.D., Bateman, A.G., **Chun, H.**, Prilleltensky, I., McMahon, A., & Brincks, A.M. (2023). Measuring Multidimensional Well-being Actions with the Newly Expanded I COPPE Actions Scale in Adults with Obesity. *Measurement in Physical Education and Exercise Science*, 27(3), 207–223. <https://doi.org/10.1080/1091367X.2022.2153595>
6. Myers, N.D., Lee, S., **Chun, H.**, & Zhu, W. (2023). Measurement in Physical Education and Exercise Science (MPEES): A Summary of MPEES-Related Activities in 2022. *Measurement in Physical Education and Exercise Science*, 27(2), 85–96.
7. Park, S., **Chun, H.**, Etnier, J.L., & Yun, D. (2023). Exploring the Mediating Role of Executive Function in the Relationship between Aerobic Fitness and Academic Achievement in Adolescents. *Brain Sciences*, 13(4), 614. <https://doi.org/10.3390/brainsci13040614>
8. Myers, N.D., Lee, S., **Chun, H.**, & Silverman, S. (2022). Measurement in Physical Education and Exercise Science: A Summary of MPEES-Related Activities in 2021. *Measurement in Physical Education and Exercise Science*, 26(3), 256–265.
9. **Chun, H.**, Yun, D., & Park, S. (2021). An Exploring Study on the Athlete's Emotional Regulation Variables. *Journal of Korea Society of Sport Psychology*, 32(2), 21–44.

Manuscripts Under Review (*Corresponding)

1. Lee, Y., **Chun, H.**, Kim, N., & Stubbs, B. (under review). Nonlinear Association Between Sedentary Time and Depression in the Post-COVID-19 United States: Evidence from NHANES 2021–2023. *Journal of Affective Disorders*.
2. Zimmerman, C. T., Myers, N. D., Driska, A. P., Pacewicz, C. E., Kim, J., **Chun, H.**, & Chung, K. (under review). Effects of a Pregame Speech Intervention on Coach Pregame Speech Efficacy and Coaching Efficacy: A Multiple Study Investigation. *Journal of Sport and Exercise Psychology*

3. Myers, N.D., **Chun, H.**, & Lee, S. (under review). Estimating Relationships Between Measures Derived from Responses to a Physical Activity Self-Efficacy Scale and Theoretically Relevant External Variables: A Monte Carlo Study. *Measurement in Physical Education and Exercise Science*
4. Kim, H., Park, Y., & **Chun, H.*** (under review). Psychological Mechanisms of Within-Session Persistence in Digital Health Interventions: Evidence from Large-Scale Behavioral Logs. *JMIR eHealth and mHealth*
5. Lee, S., Vu, S. L., Kim, J., Myers, N. D., Sarac, H., Cho, Y., **Chun, H.**, Hardersen, J., & Groathouse, D. (2026). Efficacy of the Confident Moves online intervention to promote physical activity and whole person health: Protocol for a randomized controlled trial. *Trial*.
6. Chun, H. (under review). LLM-Generated Investor Personas as Controlled Agents for Studying Sports Sentiment and Stock Returns. *Journal of Behavioral and Experimental Finance*.

Manuscripts in Progress (*Corresponding)

1. Son, V., Myers, N. D., Feltz, D., & **Chun, H.*** "Power of We": Effects of Motivational Self-Talk and Synchrony on Performance, Efficacy Beliefs, and Sense of Unity in Dyadic Exercise. [Manuscript Writing, Data Analysis]

CONFERENCE PRESENTATIONS

Poster Presentations

1. **Chun, H.**, Meyers, N., Malete, L., Lee, S., & Pacewicz, C. (2026). Determining the Dimensionality of Physical Activity Self-Efficacy (PASE): A Monte Carlo Evaluation of Factor Enumeration with Ordinal-ESEM. 2026 AASP Midwest Sport and Exercise Psychology Symposium.
2. **Chun, H.**, Myers, N.D., Pacewicz, C.E., Malete, L., Prilleltensky, I., & Lee, S. (2025, June). Two-dimensional latent physical activity self-efficacy and its relationships with physical activity: A secondary data analysis. NASPSPA Annual Conference, Lake Tahoe, NV.
3. Myers, N.D., Pacewicz, C.E., Hill, C.R., & **Chun, H.** (2024, June). Factor analysis with ordered categorical indicators and measurement of self-efficacy in physical activity contexts. NASPSPA Annual Conference, New Orleans, LA.
4. **Chun, H.**, Park, S., Yun, D., & Myers, N.D. (2024, June). Development and initial validation of the emotional regulation questionnaire in Korean athletes. NASPSPA Annual Conference, New Orleans, LA.
5. Myers, N.D., Lee, S., Bateman, A.G., Wekesser, M., Prilleltensky, I., McMahon, A., Brincks, A.M., & **Chun, H.** (2023, June). Initial validity evidence for responses to the newly developed well-being actions self-efficacy scale. NASPSPA Annual Conference, Toronto, Ontario, Canada.
6. Park, S.Y., Yun, D.H., **Chun, H.**, & Etner, J.L. (2019, June). Cognitive performance as a mediator of the relationship between aerobic fitness and academic achievement. NASPSPA Annual Conference, Baltimore, MD.
7. Park, S.Y., **Chun, H.**, Yun, D.H., & Seo, G.R. (2018, June). Depression, Stress, Health-related Quality of Life and Occupational/Leisure Time Physical Activity: The Korean National Health and Nutrition Examination Survey (2014 and 2016). Asian South-Pacific Association of Sport Psychology 8th International, Daegu, South Korea.

Oral Presentations

1. **Chun, H.**, Kim, H., & Park, Y. (2026). Psychological Mechanisms of Within-Session Persistence in Digital Health Interventions: Evidence from Large-Scale Behavioral Logs. 2026 AASP Eastern Canada Sport and Exercise Psychology Symposium.

RESEARCH EXPERIENCE

- 2025–Present **Research Assistant** · MSU, USA
 Project: *United States Tennis Association — Physical Activity of Tennis Participation*
 Responsibilities: Data collection, intervention delivery, and data analysis
 PI: Drs. Karin Pfeiffer, Jennifer Roth & Sanghoon Kim
- 2022–2023 **Data Collector** · MSU, USA
 Project: *CHAMP After-School Program*
 Measured participants' physical ability and motor skills. PI: Dr. Karin Pfeiffer
- 2019–2020 **Data Collector** · CNU, South Korea
 Project: *Sport Conditioning Program*
 Participant recruitment, measuring physical ability and skills, writing reports. PI: Dr. Jong-Gil Lee
- 2018–2019 **Research Assistant** · CNU, South Korea
 Project: *Sport Issues, Collective Emotions and Emotional Dynamics*
 Collected fan sentiment data from SNS during international sport events; conducted structured interviews. PI: Dr. Jong-Gil Lee
- 2018 **Research Assistant** · CNU, South Korea
 Surveyed participants in sport psychological counseling. PI: Dr. Dae-Hyun Yun
- 2016–2018 **Research Assistant** · CNU, South Korea
 Project: *Macro-emotional Sociological Approach to 'Sport Emotions': SNS and Big Data*
 Collected and analyzed fan emotional reactions from social media during Olympic, World Cup, and Asian Games. PI: Dr. Jong-Gil Lee

AWARDS & RESEARCH GRANTS

- 2026–2031 **Principal Investigator** · National Research Foundation of Korea (NRF)
Development and Evaluation of a Mechanism-Based, Personalized Just-in-Time Adaptive Intervention (JITAI) Coaching System for Physical Activity Maintenance in Adults with Overweight and Obesity
 ₩200,000,000 (~\$135,000) · 5 years
- 2025 **Dr. Kenneth Harding Graduate Student Endowed Scholarship** (\$1,000) · MSU
- 2025 **Dissertation Completion Fellowship** (\$7,000) · MSU
- 2024 **Summer Research Fellowship** (\$7,000) · MSU
- 2023 **Janet A. Wessel Award in Adapted Physical Activity** · Kinesiology, MSU
- 2022 **Summer Research Development Fellowship** (\$6,000) · MSU
- 2021 **Outstanding Graduate Thesis Presentation** · 2021 Winter Conference, KSSP
- 2019 **Research Scholarship** (\$5,400) · CNU
- 2018 **Outstanding Trainee, 2018 Sport Big-data Courses** · Korea Sports Promotion Foundation (KSPO)

TEACHING EXPERIENCE

- 2021–2025 **Instructor** · Outdoor Soccer, Indoor Soccer, Volleyball · MSU
 Designed curriculum, delivered lectures, managed grading for 3 sport activity courses.

- 2021–2025 **Teaching Assistant** · Latent Variable Modeling · MSU (Lecturer: Dr. Myers)
- 2021–2023 **Instructor** · Golf I & II · MSU
- 2020 **Instructor** · Statistics in Sport Psychology · CNU, South Korea
Designed and delivered full course on applied statistics for sport psychology students.
- 2022 **Guest Lecturer** · Sports and Exercise Psychology · CNU, South Korea
Topic: Motivation in Sports and Exercise Psychology

PROFESSIONAL SERVICE

- 2023–Present **Journal Reviewer** · Measurement in Physical Education and Exercise Science; Journal of Sport & Exercise Psychology; Journal of American College Health
- 2021–2023 **Editorial Assistant** · Measurement in Physical Education and Exercise Science
- 2023 **Assistant for Data Analysis** · National Academy of Kinesiology 2023 Review of Doctoral Programs
- 2022–2025 **COGS Representative** · Kinesiology Graduate Student Organization, MSU
- 2022–2023 **Member** · Welfare Committee, COGS, MSU
- 2025 **Registration Desk Volunteer** · 2025 NASPSPA Conference
- 2025 **Graduate Assistant** · Institute for the Study of Youth Sports, MSU
- 2021–2022 **Research Development Committee** · Kinesiology Graduate Student Organization, MSU
- 2021–Present **Member** · We Are Korean Educators Organization, MSU

CERTIFICATIONS & AFFILIATIONS

- 2018 **Teaching Certificate (Grade 2)** · Secondary School Teacher of Mathematics · Ministry of Education, South Korea
- 2017 **Sport Psychology Consultant (Level 3)** · KSSP

Professional Affiliations: North American Society for the Psychology of Sport and Physical Activity (NASPSPA)
· Measurement in Physical Education and Exercise Science · Korean Society of Sport Psychology