
BIOGRAPHICAL

Name: Samannaaz S. Khoja, PT, PhD

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EDUCATION and TRAINING

UNDERGRADUATE

2002-2007	Seth G.S Medical College, Maharashtra University of Health Sciences	Bachelor's Degree, 2006	Physiotherapy
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GRADUATE

2008-2009	School of Health and Rehabilitation Science, University of Pittsburgh	Master of Science, 2009	Health and Rehabilitation Science
2009 -2016	School of Health and Rehabilitation Science, University of Pittsburgh	PhD, 2016	Health and Rehabilitation Science

APPOINTMENTS and POSITIONS

ACADEMIC

2009-2014	Department of Physical Therapy, University of Pittsburgh	Teaching & Research Assistant
2014-2017	Department of Physical Therapy, University of Pittsburgh	Research Physical Therapist
2017-2018	Department of Physical Therapy, University of Pittsburgh	Postdoctoral Associate
2018 – present	Department of Physical Therapy, University of Pittsburgh	Research Assistant Professor

NON-ACADEMIC

2003-06	Assistant Fitness Instructor Talwalkar's Fitness Center, Mumbai, India
2007-08	Consulting Physiotherapist, Cardio-Pulmonary Rehab Center, Indian Institute of Environmental Medicine, Mumbai, India

CERTIFICATION and LICENSURE

MEDICAL or OTHER PROFESSIONAL LICENSURE:

Licensed PT, State of Pennsylvania, USA	2017 to present
Licensed PT, State of New York, USA	2012 to present
Licensed PT, India	2007 to present

MEMBERSHIP in PROFESSIONAL and SCIENTIFIC SOCIETIES

American Physical Therapy Association	2012 - present
Pennsylvania Chapter	2012 - present
Research Section	2012 - present
Health Policy Administration	2019 – 2020
Orthopedic Section	2020 - present
Association of Rheumatology Health Professionals	2015 - present
Academy Health	2018- 2019

HONORS

Title of Award	Year
J.N Tata Endowment-Scholarship Award for Post-graduate Studies Abroad	2008
Aga Khan Foundation- International Scholarship Award for Post-graduate Studies	2008
Bruce Baker Travel Award	2010 & 2013
SHRS Graduate Student Poster Week, 2 nd place	2011
Student Advisory Board, SHRS, Travel Award	2011 & 2013
Pitt Graduate & Professional Student Govt. Travel Award	2011
Marilyn Gossman Graduate Research Seminar Recognition Award at CSM, APTA	2013
SHRS Research Development Award (\$999.99)	2014

Aging Day Conference Poster Award (Honorary Mention), Aging Institute of UPMC 2015
Senior Services and University of Pittsburgh
Outstanding (top 5%) Reviewer for Arthritis Care and Research in 2021 2021

PUBLICATIONS

ORIGINAL PEER REVIEWED ARTICLES

1. Delitto A, Patterson CG, Stevans JM, Freburger JK, **Khoja SS**, Schneider MJ, et al. Stratified care to prevent chronic low back pain in high-risk patients: The TARGET trial. A multi-site pragmatic cluster randomized trial. *EClinicalMedicine*. 2021 Apr;34:100795.
2. Stevans JM, Delitto A, **Khoja SS**, Patterson CG, Smith CN, Schneider MJ et al. Risk Factors Associated with Transition from Acute to Chronic Low Back Pain in US Patients Seeking Primary Care. *JAMA Network Open*. 2021;4(2):e2037371
3. **Khoja SS**, Almeida GJ, Freburger JK. Recommendation Rates for Physical Therapy, Lifestyle Counseling, and Pain Medications for Managing Knee Osteoarthritis in Ambulatory Care Settings: A Cross-Sectional Analysis of the National Ambulatory Care Survey (2007-2015). *Arthritis Care Res (Hoboken)*. 2020 Feb;72(2):184-192.
4. **Khoja SS**, Patterson CG, Goodpaster BH, Delitto A, Piva SR. Skeletal muscle fat in individuals with rheumatoid arthritis compared to healthy adults. *Exp Gerontol*. 2020 Jan; 129:110768.
5. Dunlap PM, **Khoja SS**, Whitney SL, Freburger JK. Assessment of Health Care Utilization for Dizziness in Ambulatory Care Settings in the United States. *Otol Neurotol*. 2019 Oct;40(9): e918-e924
6. Delitto A, Patterson CG, Stevans JM, Brennan GP, Wegener ST, Morrisette DC, Beneciuk JM, Freel JA, Minick KI, Hunter SJ, Ephraim PL, Friedman M, Simpson KN, George SZ, Daley KN, Albert MC, Tamasy M, Cash J, Lake DS, Freburger JK, Greco CM, Hough LJ, Jeong JH, **Khoja SS**, Schneider MJ, Sowa GA, Spigle WA, Wasan AD, Adams WG, Lemaster CM, Mishuris RG, Plumb DL, Williams CT, Saper RB. Study protocol for targeted interventions to prevent chronic low back pain in high-risk patients: A multi-site pragmatic cluster randomized controlled trial (TARGET Trial). *Contemp Clin Trials*. 2019 Jul; 82:66-76
7. Piva SR, Schneider MJ, Moore CG, Catelani MB, Gil AB, Klatt BA, DiGioia AM, Almeida GJ, **Khoja SS**, Sowa G, Irrgang JJ. Effectiveness of Later-Stage Exercise Programs vs Usual Medical Care on Physical Function and Activity After Total Knee Replacement: A Randomized Clinical Trial. *JAMA Netw Open*. 2019 Feb 1;2(2)
8. Almeida GJ, **Khoja SS**, Piva SR. Dose-response Relationship between Neuromuscular Electrical Stimulation and Muscle Function in People with Rheumatoid Arthritis. *Physical Therapy*. 2019 Sep 1;99(9):1167-1176
9. Dunlap PM, **Khoja SS**, Whitney SL, Freburger JK. Assessment of Physician Adherence to Guidelines for the Diagnosis and Treatment of Benign Paroxysmal Positional Vertigo in Ambulatory Care Settings. *JAMA Otolaryngol Head Neck Surg*. 2018 Sep 1;144(9):845-846
10. Piva SR, **Khoja SS**, Toledo FGS, Chester-Wasko M, Fitzgerald GK, Goodpaster BH, Smith CN, Delitto A. Neuromuscular Electrical Stimulation Compared to Volitional Exercise for Improving Muscle Function in Rheumatoid Arthritis: A Randomized Pilot Study. *Arthritis Care Res (Hoboken)*. 2019 Mar;71(3):352-361.

11. Freburger JK, **Khoja S**, Carey TS. Primary Care Physician Referral to Physical Therapy for Musculoskeletal Conditions, 2003-2014. *J Gen Intern Med.* 2018 Jun;33(6):801-803.
12. **Khoja SS**, Moore CG, Goodpaster BH, Delitto A, Piva SR. Skeletal Muscle Fat and its Associations with Physical Function in Rheumatoid Arthritis. *Arthritis Care & Research (Hoboken)* 2018 Mar;70(3):333-342
13. **Khoja SS**, Almeida GJ, Wasko MC, Terhorst L, Piva SR. Light Intensity Physical Activity is Associated with Lower Cardiovascular Risk Factor Burden in Rheumatoid Arthritis. *Arthritis Care & Research (Hoboken)*. 2016 Apr; 68(4):424-31
14. **Khoja SS**, Browder D, Daliman D, Piva SR Benefits of Thoracic Thrust Manipulation when Applied with a Multi-Modal Treatment Approach in Individuals with Mechanical Neck Pain: A Pilot Randomized Trial. *Int J Phys Med Rehabil.* 2015 Oct; 3: 306

OTHER PEER REVIEWED PUBLICATIONS

1. Almeida GJ, **Khoja SS**, Zelle BA. Effect of prehabilitation in older adults undergoing total joint replacement: An Overview of Systematic Reviews. *Curr Geriatr Rep.* 2020 Dec;9(4):280-287.
2. Almeida GJ, **Khoja SS**, Piva SR. Physical Activity after Total Joint Arthroplasty: A Narrative Review. *Open Access Journal of Sports Medicine.* 2018 Mar; 9:55-68
3. Piva SR, Susko AM, **Khoja SS**, Josbeno DA, Fitzgerald GK, Toledo, FGS. Links between Osteoarthritis and Diabetes: Implications for Management from a Physical Activity Perspective. *Clinics in Geriatric Medicine.* 2015 Feb; 31(1):67-87
4. **Khoja SS**, Susko AM, Josbeno DA, Piva SR, Fitzgerald GK. Comparing physical activity programs for managing osteoarthritis in overweight or obese patients. *Journal of Comparative Effectiveness Research.* 2014, 3(3), 283-299

Link to bibliography here: <https://www.ncbi.nlm.nih.gov/myncbi/1t3o9n7Nez0Qx/bibliography/public/>

BOOKS, BOOK CHAPTERS AND MONOGRAPHS

Khoja S, Piva S, Toledo FS: Physical activity in obesity and diabetes. In: Obesity. edn. Edited by Ahmad SI, Imam SK: Springer International Publishing; 2016: 321-333.

ABSTRACTS (oral or poster presentations at scientific meetings)

1. **Khoja SS**, Almeida GJ, Stevans JM, Freburger JK. Physician Referral to Physical Therapists for Knee-Osteoarthritis in Ambulatory Settings. Combined Sections Meeting, Feb 22nd, 2021(virtual conference)
2. **Khoja SS**, Stevans JM, Patterson CG, Delitto A, Saper R. Primary Care Management of Acute Back Pain (BP): Cross-sectional, Secondary Analysis of a Multisite Cluster-Randomized Controlled Trial (TARGET Trial). HSR Institute May 11 & May 21 2020 (online seminar)
3. Piva SR, Patterson CM, Catelani MB, Gil AB, Schneider M, Almeida GJ, **Khoja SS**, Irrgang J. Randomized Trial on Exercise at Late-Stage after Total Knee Replacement. Combined Sections Meeting, Washington DC, January 2019

4. Dunlap PM, **Khoja SS**, Whitney SL, Freburger JK Ambulatory Care Visits for Benign Paroxysmal Positional Vertigo in the United States: Prevalence, Treatment Recommendations, and Predictors of Physical Therapy Referral. Combined Sections Meeting, Washington DC, January 2019
5. Khoja SS, Coyle P, Freburger JK. Primary Care Physician Referrals to Physical Therapy for Spine Conditions, 2006-2015. Combined Sections Meeting, Washington DC, January 2019
6. **Khoja SS**, Almeida GJ, Freburger JK Physical Therapy Referrals and Lifestyle Counseling by Physicians for Managing Lower Extremity Osteoarthritis, 2007-2015. Combined Sections Meeting, Washington DC, January 2019
7. Freburger JK, **Khoja SS**, Carey TS. Primary Care Physician Referral to Physical Therapy: Analysis of the National Ambulatory Medical Care Survey (2003-2014). Academy Health, Seattle, June 2018
8. **Khoja SS**, Almeida GJ, Freburger JK. Rate of physical therapy referral and lifestyle counseling by physicians for the treatment of lower extremity osteoarthritis: Cross-sectional Analysis of the National Ambulatory Care Survey (2007-2014). Summer Institute for Health Services Research, Boston, MA, April 2018
9. Almeida GJ, **Khoja SS**, Piva SR. Dose-response of neuromuscular electrical stimulation on muscle function in patients with rheumatoid arthritis. Combined Sections Meeting, New Orleans, February 2018
10. **Khoja SS**, Freburger JK. Temporal Trends in Ambulatory Care Physicians Referral to Physical Therapists for Musculoskeletal Conditions: Analyses of the National Ambulatory Medical Care Survey (NAMCS). Summer Institute for Health Services Research, Boston, MA, June 2017
11. **Khoja SS**, Almeida GJ, Wasko MCM, Piva SR. Sleep Efficiency and Cardiovascular Risk Burden in Rheumatoid Arthritis [abstract]. Arthritis Rheumatol. 2015; 67 (suppl 10:2170).
12. **Khoja SS**, Almeida GJ, Wasko MM, Piva SR. Physical Activity in Adults with Arthritis and its Contribution to Health Outcomes. Combined Sections Meeting, Indianapolis, February 2015
13. Catelani MB, **Khoja SS**, Almeida GJ, Piva SR. Investigation of parameters used to test quadriceps muscle power using isokinetic dynamometer in arthritis, Combined Sections Meeting, Indianapolis, February 2015
14. **Khoja SS**, Goodpaster BH, Piva SR Skeletal Muscle Fat and its Association with Physical Function and Physical Activity in Adults with Rheumatoid Arthritis. Arthritis Rheum 2014; 66 Suppl 10:1091
15. **Khoja SS**, Goodpaster BH, Piva SR. Does muscle quality contribute to Postural Balance in Rheumatoid Arthritis? Podium presentation at the American Physical Therapy Association's Combined Section Meeting, San Diego, CA, January 2013.

16. **Khoja SS**, Goodpaster BH, Piva SR. Muscle Quality Contributes more to Postural Balance than Muscle Atrophy in People with Rheumatoid Arthritis. *Arthritis Rheum* 2011; 63 Suppl 10:2611
17. **Khoja SS**, Almeida GJM, Goodpaster BH, Piva SR. Muscle Area and Muscle Quality Relate to Physical Activity in Subjects with Rheumatoid Arthritis. *Arthritis Rheum* 2011; 63 Suppl 10:1560
18. **Khoja SS**, Piva SR, Daliman D. The Effectiveness of Thoracic Spine Manipulation on Pain and Disability in patients with Neck Pain: A pilot randomized clinical trial. *Arthritis Rheum* 2010; 62 Suppl 10:2060
19. **Khoja SS**, Patil SV, Chowgule RV. Do patients with Interstitial Lung Disease benefit from Pulmonary Rehabilitation? *Indian Association of Physiotherapists, Dehradun, India* 2008

PROFESSIONAL ACTIVITIES

TEACHING

Undergraduate Student Teaching:

- 2009 – 2013 Teaching Assistant for Intro to Evidence-based Rehabilitation (REHSCI-1285). 3-credit course offered during the Fall term for Undergraduate students (seniors) in the B.S in Rehabilitation Science program, 30-45 students per semester. Sessions took place twice per week between August and December.
- 2014 – 2018 Primary Instructor for Intro to Evidence-based Athletic Training (ATHLTR 1885). 3-credit course offered during the Fall term for Undergraduate students (seniors) in Athletic Training program, 20-25 students per semester. Sessions took place twice per week between August and December.
- 2018 – 2021 Primary Instructor for Intro to Evidence-based Rehabilitation (REHSCI 1285). 3-credit course offered during the Fall term for Undergraduate students (seniors) in the B.S in Rehabilitation Science program, 30-45 students per semester. Sessions took place twice per week between August and December
- 2020 – 2021 Primary Instructor for Intro to Research Methods (REHSCI 1000). 3-credit course offered during the Spring term for Undergraduate students (juniors) in the B.S in Rehabilitation Science program, 25-30 students per semester. Sessions took place twice per week between January and April.

Graduate Student Teaching:

2014 – present Guest Lecturer for Human Anatomy (PT 2030). Offered in the summer term for 1st year DPT students, usually around 60 students. My role here included facilitating the problem-based learning cases (two to four sessions), teaching about the facial muscles of expression (1 session), and helping with surface anatomy practical exams (2 sessions).

2020 – present Guest Lecturer for Evidence-based Practice Part 1 (PT 2291) 2-credit course offered in the spring 2020 and summer term 2021 for 1st year DPT students, usually around 60-90 students. My role here included facilitating journal club discussions to appraise & interpret findings from studies of intervention. Sessions take place once per week.

2020 Guest Lecturer for Evidence-based Practice Part 2 (PT 2073) 1-credit course offered in the summer terms for 1st year DPT students, usually around 60 students. My role here included facilitating journal club discussions to appraise & interpret findings from studies of diagnosis & prognosis. Sessions take place once per week.

2020 – present Co-Instructor for Core Concepts Part 1 & 2 (HRS 3003). Core concepts is a two-part course that spans over the fall and spring semesters and is required students in their first year of the PhD in Rehabilitation Science Program. Approx 6 to 12 students, two-hour sessions occur once every other week in the fall and spring semesters. My role as co-instructor includes teaching two modules, facilitating skill development activities & grading assignments and written papers.

2021 – present Primary Instructor for Clinical Investigations (HRS 2907). 2-credit course offered during the Spring Term for Master of Science Program in the Department of Physical Therapy. Approx. 15-20 students per semester. Two-hour sessions take place once per week between January and April.

2021 - present Primary Instructor for Evidence-based practice 2 (PT-2292): Diagnosis and Prognosis. 2-credit course offered in the Fall term for second year Doctor of Physical Therapy students. Two-hour sessions take place once per week over the fall semester. Approx 60-90 students per semester.

RESEARCH

Current & Pending Grant Support:

Physician Treatment Patterns and Use of Physical Activity Interventions for Managing Knee Osteoarthritis: An Analysis using Patient Electronic Health Records at the University of Pittsburgh Medical Center (UPMC)”	Principal Investigator. No salary support	2019 - 2021	Central Research Development Fund \$ 15,280
Physician Referral Patterns to Physical Therapists for Managing Knee Osteoarthritis: An Analysis using Patient Electronic Health Records at the University of Pittsburgh Medical Center	Principal Investigator 0.6 - 0.84 calendar months	2019-2021	Foundation of Physical Therapy (CoHSTAR & AOPT) \$25,000
Learning Health Systems Scholar Award with Intermountain Healthcare System. Primary Mentor: Christine McDonough	Scholar/Mentee 1.0 calendar months	2021-2022	Learning Health Systems Rehabilitations Research Network (LeaRRn). \$10,000
Co-management And stratified Treatment CHOICES for the Primary Care management of low back pain (PENDING) – UG3/UH3	Co-Investigator Anticipated support: 4.8 calendar months	2023-2027	National Institute of Health (NIH) Study Section: National Center for Complementary and Integrative Health (NCCIH)

Prior Grant Support:

Targeted Interventions to Prevent Chronic Low Back Pain in High Risk Patients (TARGET)	Research Assistant on the Data Integrity Committee, 6.0 calendar months	2017-2020	PCORI PI – Delitto
Associations between Physical Activity and Inflammatory markers in Lumbar Spinal Stenosis	Co-Investigator 0.6 Calendar Months	2017-2019	Seed Grant Program for Aging, Disability and Rehabilitation, UPMC, PI: Gustavo Almeida

Ambulatory Care Physicians' Referral to Physical Therapists	Co-Investigator	2016-2018	U81HP26495, Health Workforce Research Centers, NCHWA, BHW, HRSA, HHS, PI- Janet Freburger
A comparison of treatment methods for patients following total knee replacement (KTX)	Research Assistant	2015-2017	PCORI, PI: Sara R. Piva
Study in Parkinson's Disease of Exercise (SPARX)	Research Assistant	2012-2016	R01 NS074343-01A1 PI(s) Margaret Schenkman, Daniel Corcos
The Use of Neuromuscular Electrical Stimulation to Reverse Muscle Atrophy in Patients with Rheumatoid Arthritis	Research Assistant	2009-2016	NIH-KO1 HD058035, PI- Sara Piva

Other research related activities

Invited peer reviewer for several peer-reviewed journals (2015 to present):

1. Arthritis Care & Research (13 reviews)
2. PTJ (20 reviews)
3. BMC Musculoskeletal Disorders (4 reviews)
4. BMJ Open (4 reviews)
5. Archives of Physical Medicine & Rehabilitation (1 review)
6. Experimental Gerontology (1 review)
7. Mental Health & Physical Activity (1 review)
8. Rheumatology International (1 review)
9. Scientific Reports Nature (1 review)
10. Therapeutic Advances in Musculoskeletal Disease (1 review)

SERVICE

1. Supervisor for 2nd year DPT students at the Pro-Bono Clinic (Birmingham Clinic) in the fall and spring terms. Supervision is about once or twice per month for 4-5 hours. (2017-present)
2. Abstract Reviewer for CSM Orthopedic Section (2017-2018)
3. Grant Reviewer for Rehabilitation Institute Pilot Grant Program, School of Health and Rehabilitation Science, University of Pittsburgh (2020)
4. Pitt DPT Admissions Review Committee (2020-present)

5. External Grant reviewer for Academy of Orthopedic Physical Therapy (2021) – New Investigator and Unrestricted grants.
6. Secretary, Executive Committee for the School of Health and Rehabilitation Science, University of Pittsburgh (2020-present)
7. Judge for students and postdoctoral poster presentations (Rehabilitation Institute Day, June 2020 and 2021)

Other Community/Student Services

1. Vice-President, Office of the Graduate and Professional Student Government, University of Pittsburgh (2011-12)
2. Graduate Student Rep to Provost's Advisory Committee for Women's Concerns (2011-12)
3. Graduate Student Rep to Board of Trustees Health Science Committee (2011-12)
4. President, Indian Graduate Student Association (ANKUR), University of Pittsburgh (2010-11)