

## **Saddam F. Kanaan, PT, CMP, MSc, PhD**

Assistant Dean, Faculty of Applied Medical Sciences  
Assistant Professor, Department of Rehabilitation Science  
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### **EDUCATION**

- PhD in Rehabilitation Science (dissertation defense with honors). 2007-2013.  
Department of Physical Therapy and Rehabilitation Science  
The University of Kansas Medical Center, Kansas City, Kansas, USA
- Post-Masters- Health Professions Educator Certificate. 2010-2011.  
School of Nursing.  
The University of Kansas Medical Center, Kansas City, Kansas, USA
- MSc. in Applied Musculoskeletal Physiotherapy. 2005-2006.  
Faculty of Health & Wellbeing.  
Sheffield Hallam University, Sheffield, United Kingdom.
- BSc. in Physical Therapy. 1999-2003.  
Department of Rehabilitation Sciences  
Jordan University of Science and Technology, Irbid, Jordan.

### **EMPLOYEMENT AND POSITIONS HELD**

- Assistant Professor. September 2013-present.  
Department of Rehabilitation Sciences  
Faculty of Applied Medical Sciences  
Jordan University of Science and Technology, Irbid, Jordan.
- Assistant Dean. September 2015-September 2016.  
Faculty of Applied Medical Sciences  
Jordan University of Science and Technology, Irbid, Jordan.
- Visiting Scholar. June-September, 2014.  
Clinical Orthopedic Rehabilitation research Laboratory  
The University of Kansas Medical Center, Kansas City, Kansas.
- Graduate Teaching and Research Assistant. 2007-2013.  
Department of Physical Therapy and Rehabilitation Science  
The University of Kansas Medical Center, Kansas City, Kansas.

- Full Time Lecturer. 2006-2007.  
Department of Rehabilitation Sciences  
Jordan University of Science and Technology, Irbid, Jordan.
- Teaching Assistant. 2004-2005.  
Department of Rehabilitation Sciences  
Jordan University of Science and Technology, Irbid, Jordan.
- Physical Therapist. 2003-2004.  
Department of Physical Medicine and Rehabilitation  
King Abdullah University Hospital, Irbid, Jordan.

## **TEACHING EXPERIENCE**

- Course Coordinator and Instructor Fall 2013-current)  
Department of Rehabilitation Sciences  
Jordan University of Science and technology, Irbid, Jordan
  - Spring 2017 Introduction to Physical Therapy
  - Spring 2017 Introduction to Clinical Practice
  - Fall 2017 Clinical Practice in Orthopedics Physical Therapy I
  - Fall 2017 Physical Therapy in Orthopedics I
  - Summer 2016 Disability and the Society (elective course)
  - Spring 2016 Introduction to Physical Therapy
  - Spring 2016 Physical Therapy in Orthopedics II
  - Fall 2016 Clinical Practice in Orthopedics Physical Therapy
  - Fall 2016 Physical Therapy in Orthopedics I
  - Summer 2015 Prosthetics and Orthotics for Physical Therapy
  - Spring 2015 Introduction to Physical Therapy
  - Spring 2015 Clinical Practice in Orthopedics Physical Therapy
  - Spring 2015 Physical Therapy in Orthopedics I
  - Fall 2014 Physical Therapy in Orthopedics
  - Fall 2014 Physical Therapy in Sport Injuries
  - Fall 2014 Introduction to Physical Therapy
  - Spring 2014 Diseases of Muscles and Bones
  - Spring 2014 Clinical Practice in Orthopedics Physical Therapy
  - Fall 2013 Physical Therapy in Orthopedics
  - Fall 2013 Physical Therapy in Sport Injuries
  - Fall 2013 Introduction to Physical Therapy
- Graduate Teaching Assistant  
Department of Physical Therapy and Rehabilitation Science  
The University of Kansas Medical Center, USA
  - Spring 2013 Musculoskeletal Physical Therapy I
  - Fall 2012 Musculoskeletal Physical Therapy II
  - Summer 2012 Neurologic Physical Therapy I
  - Spring 2012 Musculoskeletal Physical Therapy I
  - Fall 2011 Musculoskeletal Physical Therapy II
  - Summer 2011 Health Promotion through the Life Span
  - Spring 2011 Physical therapy Interventions

- Spring 2011      Cardiopulmonary Physical Therapy
  - Fall 2010        Applied Kinesiology & Biomechanics
  - Fall 2010        Neuroscience Analysis of Occupational Performance.
  - Summer 2010    Physical Therapy Tests and Measures
  - Fall 2009        Applied Kinesiology and Biomechanics
  - Fall 2008        Musculoskeletal Physical Therapy II
  - Summer 2008    Neurologic Physical Therapy I
- Full Time Lecturer  
Department of Rehabilitation Sciences  
Jordan University of Science and Technology, Irbid, Jordan
    - Summer 2007    Electrotherapy
    - Summer 2007    Cardiopulmonary Rehabilitation
    - Spring 2007     Clinics in Physical Therapy II
    - Spring 2007     Sport Physical Therapy
    - Spring 2007     Clinics in Physical Therapy I
    - Fall 2006        Exercise physiology
    - Fall 2006        Cardiopulmonary Rehabilitation
- Teaching Assistant  
Department of Rehabilitation Science  
Jordan University of Science and Technology, Irbid, Jordan
    - Summer 2005    Electrotherapy
    - Spring 2005     Clinics in Physical therapy II
    - Spring 2005     Therapeutics Exercises
    - Fall 2004        Clinics in Physical Therapy I
    - Fall 2004        Physical Agents
    - Fall 2004        Physical therapy Assessment

### **RESEARCH INTEREST**

- Effectiveness of manual therapy approaches on different musculoskeletal disorders.
- Prevalence and associated factors of physical and mental symptoms among healthcare students.
- Health professions education research.

### **RESEARCH EXPERIENCE**

- February, 2011-August, 2013. PhD Dissertation.  
Orthopedic Rehabilitation and Research Laboratory.  
Mentor: Neena Sharma, PT, PhD
  - Research project: Predicting health care needs after lumbar spine surgery
- February, 2011 –August 2013. Graduate Research Assistant.  
Clinical Orthopedic Rehabilitation and Research Laboratory.  
Mentor: Neena Sharma, PT, PhD
  - Research Project: Biochemical changes with magnetic resonance spectroscopy following exercise training in chronic low back pain.
  - Research Project: Cortical changes following physical therapy intervention in subacute low back pain: a pilot study

- August, 2011 –January, 2013. Graduate Research Assistant.  
Survivorship Optimization Laboratory and Clinic.  
Mentor: Lisa VanHoose, PT, PhD
  - Research Project: Feasibility study of sequential Pneumatic compression therapy in the treatment of lymphedema of the morbidly obese
- December, 2007 –2012. Graduate Research Assistant.  
Functional Performance Laboratory.  
Mentor: Patricia Pohl, PT, PhD
  - Research project: The effect of mode of delivery in cognitive training in subjects with mild Alzheimer’s disease.
- December, 2005- September, 2006. MSc Dissertation.  
Sheffield Hallam University, Sheffield, UK;  
Mentor: Kate Grafton MSc MCSP MMACP
  - Research project: Ulnar nerve mechanosensitivity after push-up exercise: a comparison between keyboard users and non-keyboard users.

### **CLINICAL EXPERIENCE**

- February, 2014 – present. Clinical supervisor
  - Princess Bassma Teaching Hospital, Irbid, Jordan.
- September, 2006 – May, 2007. Clinical supervisor
  - King Abdullah University Hospital.
  - Princess Basma Teaching Hospital.
  - Royal Medical Services (Farah Royal Rehabilitation Center).
- June, 2004 – September, 2005. Clinical supervisor
  - King Abdullah University Hospital.
  - Cerebral Palsy Foundation (pediatrics).
  - Royal Medical Services (Farah Royal Rehabilitation Center).
- July, 2003 – June 2004. Physical Therapist  
Department of Physical Medicine and Rehabilitation  
King Abdullah University Hospital, Irbid, Jordan.
  - Outpatient Neurological Rehabilitation
  - Outpatient Musculoskeletal Disorders
  - Inpatient care

### **PEER REVIEWED MANUSCRIPTS**

- Mansour ZM, Martin LE, Lepping RJ, **Kanaan, SF**, Brooks, WM, Yeh, HW, Sharma, N. K.. Brain Response to Non-Painful Mechanical Stimulus to Lumbar Spine. Brain sciences. 2018;8(3).
- Almhdawi KA, Mathiowetz V, Al-Hourani Z, Khader Y, **Kanaan SF**, Alhasan M. Musculoskeletal pain symptoms among allied health professions' students: Prevalence rates and associated factors. Journal of back and musculoskeletal rehabilitation. 2017;30(6):1291-1301.

- Melton BL, Moqbel M, **Kanaan S**, Sharma NK. (2016). Structural Equation Model of Disability in Low Back Pain. Spine.
- **Kanaan, S. F.**, Arnold, P. M., Burton, D. C., Yeh, H. W., Loyd, L., & Sharma, N. K. (2015). Investigating and predicting early lumbar spine surgery outcomes. J Allied Health, 44(2), 83-90.
- **Kanaan, SF.**, Waitman, R., Yeh, H., Arnold, P., Burton, D., and Sharma, NK (2015). Structural Equation Model Analysis of the Length of Hospital Stay Following Lumbar Spine Surgery. The Spine Journal, 15(4), 612-621.
- Gras, L., **Kanaan, SF.**, McDowd, JM., Colgrove, Y., and Pohl, PS. Balance and Gait of Adults with Very Mild Alzheimer's Disease. Geriatric Physical Therapy Journal. 2015; 38(1), 1-7.
- **Kanaan, SF.**, Yeh, H., Waitman, R., Burton, D., Arnold, P., and Sharma, NK. Predicting Discharge Placement and Health Care Needs After Lumbar Spine Laminectomy. Journal of Allied Health. 2014; 43(2): p. 88-97.
- **Kanaan, SF.**, McDowd, J., Colgrove, Y., Burns, J., Gajewski, B., and Pohl, PS. Feasibility and Efficacy of Intensive Cognitive Training in Early-Stage Alzheimer's Disease. American Journal of Alzheimer's Disease and Other Dementias. March 2014; 29 (2): 150 – 158.

**PEER REVIEWED SCIENTIFIC AND PROFESSIONAL PRESENTATIONS**

- **Kanaan SF**, Khreis H. Mulligan Concept for Cervicogenic Headache: Current Level of Evidence. 6th Biennial Emirates Physiotherapy Conference: Dubai, UAE, 2018. (Platform presentation)
- **Kanaan SF.** Cervicogenic Headache Management: Current Level of Evidence. Fizyoterapi ve Rehabilitasyonda Gelişmeler Konferansı: Antalya, Turkey, 2018. (Platform presentation)
- **Kanaan SF**, Almhdawi KA. Predictors of Quality of Life of Applied Medical Sciences' Students. 3rd International Conference: Physical Therapy Services in Conflict Affected Countries: Amman, Jordan, 2018. (Platform Presentation).
- **Kanaan SF**, Almhdawi KA. Predictors of Quality of life of rehabilitation sciences' students. World Confederation for Physical Therapy Congress 2017: Cape Town, SA, 2017. (Platform Presentation).
- **Kanaan SF**, Siengsukon C, Arnold P, Burton D, Emmanuel N, Sharma N. Relationship between sleep quality and functional and psychological symptoms in patients with chronic low back pain. Physiotherapy. 2015;101, Supplement 1(0):e713-e4.

- Mansour, Z., Lepping, R.J., Honea, R., **Kanaan, SF.**, Brooks, W., and Sharma, NK. Structural Brain Differences in Patients with Chronic Low Back Pain, American Physical Therapy Association Combined Section Meeting: Indianapolis, IN, 2015. (Poster Presentation)
- Mansour, Z., Martin, LE., Lepping, R.J., **Kanaan, SF.**, Cowley, B., Papa, VB., Brooks, W., and Sharma, NK. Brain responsiveness to mechanical pressure in patients with sub-acute low back pain. Annual Meeting of the Society for Neuroscience: Washington, DC, 2014. (Poster Presentation)
- Gras, L., **Kanaan, SF.**, Colgrove, Y., McDowd, J., and Pohl, PS. Balance and Gait Deficits in Adults with Very Mild Alzheimer's Disease. Combined Section Meeting Geriatric Section, Las Vegas, Nevada. February, 2014. (Platform presentation)
- Cowley, B., Martin, L, **Kanaan, SF.**, Lepping, R., Cirstea, C., and Sahrma, NK. Cortical Response to Lumbar Spine Mechanical Stimulus in Healthy and Subacute Low Back Pain. Student Research Forum, KUMC, Kansas City, Kansas. April, 2013. (Platform presentation)
- Sharma, NK., **Kanaan, SF.**, Cirstea, CM., Sanchez, K., Gorman, P., Singh, G., Mehvar, F., Mansour, Z., and Brooks, W. Investigating Low Back Pain and Effects of Exercise Training with MRS. Integrating Technology into Translational Research Symposium. Kansas City, Missouri. May, 2013 (Platform presentation)
- Sharma, NK., **Kanaan, SF.**, Cirstea, CM., Sanchez, K., Singh, G., Mehvar, F., Mansour, Z., Gorman, P., Cowley, C., and Brooks, W. "Effects of Exercise Training on Affective Pain Regions in Chronic Low Back Pain". Translational Science 2013, Washington, DC. April 2013 (Poster presentation)
- **Kanaan, SF.**, Waitman, R., Yeh, H., Loyd, L., Sanchez, K., and Sharma, N. K. Inpatient Physical Therapy Assessment Predicting Discharge Placement After Lumbar Spine Surgeries: Retrospective Analysis. Kansas Physical Therapy Association Spring Conference, Wichita, Kansas. April, 2013. (Platform presentation)
- Sharma, NK., Cirstea, CM., **Kanaan, SF.**, Gajewski, B., Popescu, A., McCarson, K., Van Dillen, L., Gorman, P., Sanchez, K., and Brooks, W. Biochemical Changes with Magnetic Resonance, Spectroscopy Following Exercise in Chronic Low Back Pain. Faculty Research Day, KUMC, Kansas City, Kansas, 2012 (Poster presentation)
- **Kanaan, SF.**, Haynes, E., Messer, T., VanHoose, L. The Impact of Sequential Pneumatic Compression Therapy on the Lymphedema Treatment of the Severely Overweight: a Case Series Analysis. The National Lymphedema Network - 2012 NLN Conference, Dallas, Texas. September, 2012. (Poster presentation)

- **Kanaan, SF.**, Arnold, P., Burton, D., Sanchez, K., Emmanuel, N., and Sharma, N. Assessment of Health Care Needs during Hospital Stay Following Lumbar Spine Surgeries. Kansas Physical Therapy Association Spring Conference, Wichita, Kansas. April, 2012. (Poster presentation)
- McDowd, J., **Kanaan, SF.**, & Pohl, P. Intensive Individual Cognitive Training in Alzheimers Disease: Evidence for Limited Effects. Gerontological Society of America National Meeting, New Orleans, LA. November, 2011. (Poster presentation)
- **Kanaan, SF.**, and Pohl, P, S. Balance and Gait in Adults with Very Mild Alzheimer's Disease: a Pilot Study. Kansas Physical Therapy Association Spring Conference, Wichita, Kansas. April, 2010. (Poster presentation)
- **Kanaan, SF.**, McDowd, J., Burns, J., Savage, C., and Pohl, P, S. Brain Activation in Adults with Alzheimer's after Intense Cognitive Training. Student Research Forum, KUMC, Kansas City, Kansas. April, 2010 (Platform presentation)
- **Kanaan, SF.**, McDowd, J., Pohl, P, S. Practice Effects on Task Switching in Adults with Early Alzheimer's Disease. Cognitive Aging Conference, Atlanta, Georgia. April , 2010 (Poster presentation)

#### **CO-MENTORSHIP FOR GRADUATE STUDENTS**

- Mohammad Darabseh (2016). The effect of pedometer-based intervention on patients after total knee replacement surgeries. Master degree. Physical Education Faculty, Yarmouk University.
- Cowley. B, **Kanaan SF**, Sharma NK. Cortical Response to Lumbar Spine Mechanical Stimulus in Healthy and Subacute Low Back Pain: a fMRI study
- Pringle. K, **Kanaan. SF**, Sharma. NK. Correlation between multifidus muscle cross sectional area and clinical outcomes in patients with chronic low back pain. (Outstanding DPT platform presentation award).
- Schippers. S, Pfizenmaier. M, Pohl. P, Burns, J, **Kanaan. SF**, McDowd. J, Savage. C. Intense Cognitive Training in Very Mild Alzheimer's disease: A Preliminary Report on the Effects of Practice.
- Berry. M, Sharp. S, Pohl. P, **Kanaan. SF**. Changes in Brain Activity of Adults with Very Mild Alzheimer's Disease After an Intense Cognitive Training Program: A Case Report.

#### **LEADERSHIP AND AWARDS**

- James P. Cooney Leadership Award. School of Health Professions Alumni Association. KUMC. 2013.
- Student Senate Scholarship Award from School of health Professions, KUMC. 2013.
- Research Travel Award - Student Governing Council, KUMC. 2012
- Scholar, The Honor Society of Phi Kappa Phi, University of Kansas. 2012.

- Bittel Family Scholarship- Physical Therapy and Rehabilitation Science, KUMC. 2012.
- Outstanding Graduate Research Assistant Award- Physical Therapy and Rehabilitation Science, KUMC. 2012.
- Outstanding Graduate Teaching Assistant Award- Physical Therapy and Rehabilitation Science, KUMC. 2012.
- Founder and President elect- KUMC Orthopedic Seminar Series. 2011-2012.
- Outstanding Doctoral Student Award from the Graduate Studies and Academic Affairs Office, KUMC. 2011.
- Outstanding Graduate Teaching Assistant Award- Physical Therapy and Rehabilitation Science KUMC. 2010.
- Member, International Affairs Committee- KUMC. 2010.
- President- KUMC Muslim students Organization. 2008-2010.
- Scholar, Golden Key International Honor Society. 2009.
- Scholar, The National Leadership and Honor organizations of Sigma Alpha Lambda, University of Kansas. 2009.
- Scholarship for PhD degree. Jordan University of Science and Technology. 2007
- Sheffield Hallam University Alumni of the month, UK. 2007.
- Dean's Appreciation Letter, JUST, Jordan. 2006.
- Scholarship for master degree, JUST, Jordan. 2005
- Dean's list for outstanding academic semester achievement. JUST, Jordan. Spring 2002.

#### **MEMBERSHIP IN SCIENTIFIC/PROFESSIONAL ORGANIZATIONS**

- Head of Scientific Committee. Jordanian Physiotherapy Society. March 2016- Present. Member, American Society of Neurology, 2013.
- Member, Society For Neuroscience, 2011-2012.
- Member, American Physical Therapy Association, 2011-2012
- Member, Orthopedic Section of the American Physical Therapy Association, 2011 –2012
- Member, American Association of Advancement of Science. 2008
- Member, Jordanian Physiotherapy Society, 2005-present.

#### **CONTINUING EDUCATION TAUGHT**

- Cervicothoracic Assessment and Management. Jordanian Physiotherapy Society. Irbid, Jordan. March, 2018.
- Physical Agents for Occupational Therapists. Irbid, Jordan. May, 2017
- Assessment and Innovative Teaching Methods in Applied Medical Sciences. Jordan University of Science and Technology. Irbid, Jordan.
- Neurodynamic Concept Approach in Assessment and Management of Upper Quadrant. Amman, Jordan. June 2015.

#### **CONTINUING EDUCATION ATTENDED**

- Wheelchair Service Training Package: Managers and Stakeholders Level. Amman, Jordan. September, 2017.
- Manual Therapy Diploma. Amman, Jordan. March 2016.



- Internal Quality Management System Training course. Jordan University of Science and Technology, September 2015.
- Mulligan's Concepts: Mobilisations with Movements part D: Certification and Examination. Amman, Jordan. August 2015.
- Clinical Orthopedic Manual Therapy (COMT)/ cervical spine. Amman, Jordan. March 2015.
- Scientific Manuscript Writing Workshop. Dead Sea, Jordan. December 2014.
- Mulligan's Concepts: Mobilisations with Movements part C: Advanced level. Amman, Jordan. November 2014.
- Mulligan's Concepts: Mobilisations with Movements part B: Lumbar and Lower Quadrant. Amman, Jordan. September 2014.
- Mulligan's Concepts: Mobilisations with Movements part A: Cervical and Upper Quadrant. Amman, Jordan. September 2014.
- Development of curriculum and study plans. Irbid, Jordan. January 2014
- Advanced Statistical Analysis using SPSS. Irbid, Jordan. September 2013
- Kinesio Taping KT1/KT2. Kansas City, KS. July 2013.
- Role of physical therapy in Spinal Pain Management. Kansas City, MO. July 2011.
- Anterior Knee Pain: Diagnosis and Treatment. Peterborough, UK. September 2006.
- Grade V Spinal Manipulation Course. Harrogate, UK. May 2006.
- Cervical Arterial Dysfunction and Manual Therapy Workshop. Sheffield, UK. April 2006.

### **COMMUNITY SERVICE**

- Volunteer, Open Medical Day. Amman, Jordan. April, 2017.
- Volunteer, Open Medical Day at Fatima Bint Alyaman school. 2015.
- Invited Speaker, "Classroom Culture in USA": International Students Orientation, KUMC. 2009 and 2012.
- Volunteer, International Students Orientation- KUMC. 2009- 2012.
- Volunteer, Sport is Medicine Conference-KUMC, 2012.
- Invited Speaker, Cultural awareness presentations- Counseling & Educational Support Services, KUMC. 2010.
- Volunteer, Medical students orientation- KUMC. 2009.
- Volunteer, Culturefest'09, KUMC. 2009
- Volunteer, KUMC Street Fair 2009
- Graduate Student Council representative at Student education and advocating of diversity. 2009.
- Volunteer, Student Research Forum. 2008
- Volunteer, Geriatric Day. Amman- Jordan. 2006

### **TECHNICAL SKILLS**

- HERON system: Navigation and extraction of healthcare outcome measures from large database. Designing and implementing retrospective study using the HERON system including research questions, data mining, and data analysis.
- Large data set mining.
- SPSS software: descriptive analysis, General Linear Model, regression analysis, Multivariate analysis, and nonparametric analysis.
- Amos software: statistics modeling (principal components analysis and structural equation modeling).

- Neuroimaging: fMRI analysis with Brain voyager software.
- Other research skills: Physical, behavioral and cognitive testing.