

Sumayah Burhan Abujaber, PT, PhD

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EDUCATION

- **Doctor of Philosophy** in Biomechanics and Movement Science, 2014
 - BIOMS Program
 - University of Delaware, Newark, DE, USA
 - Advisor: Joseph A. Zeni, Jr.
 - *Dissertation Title:* The Relationships between Physical Impairments, Functional Limitations and Movement Asymmetries Before and After Total Hip Arthroplasty: A Longitudinal Study
- **Master of Science** in health and rehabilitation sciences with neuromuscular concentration, 2010
 - School of health and rehabilitation sciences (SHRS)
 - University Of Pittsburgh, Pittsburgh, PA, USA
- **Bachelor of Science** in Physical Therapy, 2007
 - Faculty of Rehabilitation Sciences, Department of Physical Therapy
 - The University of Jordan, Amman, Jordan

CURRENT APPOINTMENT

- **Assistant Professor**
 - The University of Jordan - Faculty of Rehabilitation Sciences, Department of Physical Therapy, Amman, Jordan 2015-present
- **Dean assistant for the student affairs**
 - Faculty of Rehabilitation Sciences, 2015- 2016

PROFESSIONAL HISTORY

- **Graduate Research Assistant, September 2014 -December 2014**
 - Biomechanics and Movement Science Program
 - University of Delaware, Newark, DE, USA
- **Undergraduate Teaching Assistant, September 2007- August 2009**
 - The University of Jordan - Faculty of Rehabilitation Sciences, Department of Physical Therapy, Amman, Jordan

AWARDS AND HONORS

- 2007-Placed first in the class in Bachelor degree of physiotherapy- Faculty of Rehabilitation Sciences, Amman, Jordan (GPA=3.99)
- 2007-Placed first in Bachelor degree at the level of college among the four programs in Faculty of Rehabilitation Sciences, Amman, Jordan (GPA=3.99)
- 2009-Full scholarship for Master and PhD degrees from The University of Jordan
- 2012- Received an award of Honored Poster presentation entitled “Sit to Stand Mechanics after Symmetry Training for Patients after Total Knee Arthroplasty” at Center for Biomedical Engineering Research symposium (CBER)

RESEARCH INTEREST

- Investigate the relationships between physical impairments and limited functional abilities and participation in patients with lower extremity pathology particularly in patients with knee and hip osteoarthritis and in patients after joint arthroplasty.
- Study the biomechanics of different fundamental tasks such as sit to stand and walking especially in patients with lower extremity pathology.
- Investigate the effect of abnormal movement patterns in patients with knee and hip osteoarthritis and in patients after joint arthroplasty on the progression of osteoarthritis in the “affected” and “non-affected” limbs.

- Developing treatment interventions that maximize functionality and normalize movement patterns in patients with knee and hip osteoarthritis and in patients after joint arthroplasty.

WORKSHOPS AND ETHICS COURSEWORKS

- Workshop entitled "**Vestibular physical therapy: Can dizziness and postural control improve with exercise**"
 - Susan Whitney, PT, DPT, PHD, NCS, ATC, FABTA.
 - UPMC Institute for Rehabilitation and Research- November 11, 2009
- **Course In The Protection Human Subjects-CITI program, University of Delaware**
 - Human Subjects Protections for Graduate Students- Basic Course. 2010
 - Human Subjects Protections for Graduate Students- Refresher Course. 2013
- **Responsible Conduct of Research-CITI program, University of Delaware**
 - Social and Behavioral Responsible Conduct of Research Course-2010
- **CPR training course** for the Professional Rescuer- 2010
- **CPR training course** for the Professional Rescuer- 2013
- Dissertation boot camp, **writing workshop**- University of Delaware-2013
- **Staff Development Workshops**
 - The University of Jordan
 - 20-24/8/2015
- **Recent trends in university teaching- course**
 - The University of Jordan
 - 24/5/2017

SKILLS

- Using Software programs specifically for human movement analysis (acquiring and processing data):
 - Nexus and workstation software (VICON)

- Visual 3D software
- Lab view software
- Computer: Statistical Package (SPSS)
- Languages: Fluent in both spoken and written Arabic and English.

MEMBERSHIPS

- Member of the Jordanian Association of Physical Therapists (Since 2015)

SERVICE

- **Community service at the faculty of rehabilitation sciences-UJ**
 - Member of the scientific research committee (2015-)
 - Member of the conferences and seminars committee (2015-)
 - Head of the student issues committee (2015-)
- **AD HOC REVIEWER**
 - Public Library Of Science (PLOS ONE)- Open Access multidisciplinary journal
 - Journal of Orthopaedic & Sports Physical Therapy (JOSPT)
 - Gait & Posture Journal
 - An external referee for grant application to the “ZonMw” (the Netherlands Organization for Health Research and Development)

PEER-REVIEWED PUBLICATIONS

1. **Abujaber, S.**, Pozzi, F., & Zeni, J. (2017). Influence of weight bearing visual feedback on movement symmetry during sit to stand task (in press). *Clinical Biomechanics*, 47, 110–116. doi.org/10.1016/j.clinbiomech.2017.06.005.
2. **Abujaber, S. B.**, Marmon, A. R., Pozzi, F., Rubano, J. J., & Zeni, J. a. (2015). Sit-To-Stand Biomechanics Before and After Total Hip Arthroplasty. *The Journal of Arthroplasty*, 30(11), 2027–33. doi:10.1016/j.arth.2015.05.024
3. **Abujaber, S.**, Gillispie, G., Marmon, A., & Zeni, J. (2015). Validity of the Nintendo Wii Balance Board to assess weight bearing asymmetry during sit-to-stand and return-to-sit task. *Gait & Posture*, 10–14. doi:10.1016/j.gaitpost.2015.01.023
4. Zeni, J., Pozzi, F., **Abujaber, S.**, & Miller, L. (2015). Relationship between physical impairments and movement patterns during gait in patients with end-stage hip osteoarthritis. *Journal of Orthopaedic Research : Official Publication of the Orthopaedic Research Society*, 33, 382–9. doi:10.1002/jor.22772

5. Zeni, J., **Abujaber, S.**, Pozzi, F., & Rasis, L. (2014). Relationship between strength, pain, and different measures of functional ability in patients with end-stage hip osteoarthritis. *Arthritis Care & Research*, 66, 1506–12. doi:10.1002/acr.22329
6. Zeni, J., **Abujaber, S.**, Flowers, P., Pozzi, F., & Snyder-Mackler, L. (2013). Biofeedback to Promote Movement Symmetry After Total Knee Arthroplasty: A Feasibility Study. *The Journal of Orthopaedic and Sports Physical Therapy*, 43(10), 715–726. doi:10.2519/jospt.2013.4657
7. **Abujaber, S.**, Zeni, J., Pozzi, F., Influence of Weight Bearing Visual Feedback on Movement Symmetry during Sit to Stand Task. *Under review-Clinical Biomechanics*

PRESENTATIONS AND ABSTRACTS

Invited Presentations

1. **Abujaber, S.** Retraining movement patterns and identifying underlying impairments before and after total hip replacement. **BIOMS Seminar, Sep 2013**

Peer-Reviewed Abstract Presentations

1. **Abujaber S**, Gillispie G, Marmon S, Zeni J. Validity Of The Nintendo Wii Balance Board For Assessment of Weight Bearing Asymmetry. (Platform presentation presented by Dr. Zeni), at Combined Sections Meeting (CSM) of the American Physical Therapy Association **2015**, Indianapolis, IN
2. Zeni J, **Abujaber S**, Pozzi F. Are Changes in Clinical Impairments Related to Improvements in Function after Total Hip Arthroplasty? (Platform presentation), at Combined Sections Meeting (CSM) of the American Physical Therapy Association **2015**, Indianapolis, IN
3. Pozzi F, **Abujaber S**, Fenstermacher S, Zeni J. Relationship between functional performance and falls in female patients with end stage hip osteoarthritis. At World Congress of the Osteoarthritis Research Society International (OARSI) 2015; Seattle, USA.
4. Zeni J, **Abujaber S**, Pozzi F, Marmon A. Influence of weight bearing visual feedback on movement symmetry during sit to stand task in patients with hip OA. At World Congress

of the Osteoarthritis Research Society International (OARSI) 2015; Seattle, USA.
Osteoarthritis and Cartilage, 23, Supplement 2, Pages A114–A115

5. **Abujaber S**, Pozzi F, Zeni J. Movement Asymmetries During Sit To Stand Task Before And After Total Hip Arthroplasty. Platform presentation at Biomechanics Research Symposium- Center for Biomechanical Engineering Research (CBER). April 21, 2014, Newark, DE.
6. Pozzi F, **Abujaber S**, Zeni J. Preoperative predictors of postoperative function in individuals undergoing total hip arthroplasty. (Poster presentation). At World Congress of the Osteoarthritis Research Society International (OARSI) 2014; Paris, France.
7. Zeni J, Miller L, Pozzi F, **Abujaber S**. Clinical impairments underlying abnormal frontal plane biomechanics in persons with end-stage hip osteoarthritis. (Poster presentation). At World Congress of the Osteoarthritis Research Society International (OARSI) 2014; Paris, France. *Osteoarthritis and Cartilage*, 22, S93-S94
8. Zeni J, **Abujaber S**, Pozzi F, Rasis L. Pain and strength are related to different measure of functional ability in patient with hip OA. (Poster presentation). At The Arthritis State of the Science meeting; Pentagon City, VA, USA.
9. **Abujaber S**, Zeni J. Muscle strength and pain differentially influence functional ability after total hip arthroplasty. Poster presentation). At Combined Sections Meeting (CSM) of the American Physical Therapy Association 2014, Las Vegas, NV
10. Zeni J, **Abujaber S**, Pozzi F. Strength and pain are related to different measures of disability in patients with hip OA. (Platform presentation). At Combined Sections Meeting (CSM) of the American Physical Therapy Association 2014, Las Vegas, NV
11. **Abujaber S**, Marmon A, Zeni J. Real-time weight bearing feedback improves movement symmetry during sit to stand task. Poster presentation at Biomechanics Research Symposium- Center for Biomechanical Engineering Research (CBER). May 3, 2013, Newark, DE.
12. **Abujaber S**, Marmon A, Zeni J. Visual feedback improves movement symmetry during sit to stand (Poster presentation). At the 37th Annual Meeting of the American Society of Biomechanics (ASB); September 4-7, 2013; Omaha NE, USA

13. Pozzi F, **Abujaber S**, Zeni J. Biomechanical asymmetries during gait in individuals before and three months after unilateral total hip arthroplasty (Poster presentation). At the 37th Annual Meeting of the American Society of Biomechanics (ASB); September 4-7, 2013, Omaha, NE, USA
14. **Abujaber S**, Marmon A, Zeni J. Improvements in biomechanical symmetry are related to improved functional performance following total knee arthroplasty. (Poster presentation). At The annual World Congress of the Osteoarthritis Research Society International (OARSI). April 18-21, 2013; Philadelphia PA
15. Pozzi F, **Abujaber S**, Flowers P, Zeni J. Lower limb strength and gait biomechanics of individuals with end-stage hip osteoarthritis (Poster presentation). At The annual World Congress of the Osteoarthritis Research Society International (OARSI); Philadelphia, USA. Osteoarthritis and Cartilage. 2013; 21(S): S106-107
16. **Abujaber S**, Pozzi F, Marmon A, Aukamp C, Rombach S, Snyder-Mackler L, Zeni J. Outcomes after total knee arthroplasty: Community partnership between the University of Delaware and Christiana Care Health System (Poster presentation). At Delaware Orthopaedic Symposium. October 27, 2012; Newark DE
17. Flowers P, **Abujaber S**, Pozzi F, Snyder-Mackler L, Zeni J. Biofeedback to promote movement symmetry after TKA: A pilot and feasibility study (Poster presentation). At Delaware Orthopaedic Symposium. October 27, 2012; Newark DE
18. Pozzi F, Flowers P, Abujaber S, Zeni J. Total hip replacement outcome study: Community partnership between the University of Delaware and Christiana Care Center for Advanced Joint Replacement (Poster presentation). At Delaware Orthopaedic Symposium. October 27, 2012; Newark DE
19. Zeni J, Logerstedt D, **Abujaber S**, Flowers P, Pozzi F, Snyder-Mackler L. Rehabilitation to reduce secondary osteoarthritis after total knee arthroplasty. At OARSI Annual Meeting, Barcelona 2012
20. **Abujaber S**, Marmon A, Zeni J. Visual feedback improves movement symmetry during sit to stand. Poster presentation at the 36th Annual Meeting at of the American Society of Biomechanics (ASB). August 2012; Gainesville, FL, USA.
21. **Abujaber S**, Zeni J, Snyder-Mackler L. Sit to stand mechanics after symmetry training for patients after total knee arthroplasty. Poster presentation at Biomechanics Research

Symposium- Center for Biomechanical Engineering Research (CBER). April 23, 2012, Newark, DE.

ATTENDED CONFERENCES AND SYMPOSIUMS

1. Scientific day of the of the Rehabilitation Sciences school. April 11, 2017
2. 1st Scientific Conference of the Faculty of Rehabilitation Sciences (Local). May 6, 2015 , Amman, Jordan.
3. Biomechanics Research Symposium- Center for Biomechanical Engineering Research (CBER). April 21, 2014, Newark, DE.
4. Combined Sections Meeting (CSM) of the American Physical Therapy Association February 2014, Las Vegas, NV
5. Biomechanics Research Symposium- Center for Biomechanical Engineering Research (CBER). May 3, 2013, Newark, DE.
6. The annual World Congress of the Osteoarthritis Research Society International (OARSI). April 18-21, 2013; Philadelphia PA
7. the 37th Annual Meeting of the American Society of Biomechanics (ASB); September 4-7, 2013; Omaha NE, USA
8. Biomechanics Research Symposium- Center for Biomechanical Engineering Research (CBER). April 23, 2012, Newark, DE.
9. Delaware Orthopaedic Symposium. October 27, 2012; Newark DE

TAUGHT COURSES

- Principles & Ethics of Medical Rehabilitation (1801101)
- Therapeutic exercise 1 (1801203)
- Biomechanics (1801261)
- Kinesiology (1801262)
- Gait analysis I (1803205)
- Clinical physiotherapy II (1801492)