|  |
| --- |
| **Name: Hanan Khalil** |
| **Present appointment** |
| Associate professor of neurological physical therapy, department of rehabilitation sciences, faculty of applied medical sciences, Jordan university of science and technology. Vice dean, faculty of applied medical sciences, Jordan university of science and technology. |
| **Address:** Department of Rehabilitation Sciences (Division of Physical Therapy) Faculty of Applied Medical SciencesJordan University of Science and Technology22110 Irbid, P.O. Box 3030 Jordan |
| **Telephone number: +962-797713017** | **Email address:** hwkhalil8@just.edu.jo; hwskhalil@gmail.com |
| **Qualifications:** PhD Physiotherapy, Cardiff University, UK (Neurological Rehabilitation)MSc Physiotherapy, Cardiff University, UK (Neurological Rehabilitation)BSc Physical Therapy Jordan University of Science & Technology (J.U.S.T), Jordan**Fellowship:** **2016:** Fellowship in Responsible Conduct of Research, University of California Saint Diego, USA |
| **Awards** |
| **2018:** L’Oréal UNESCO For Women In Science Levant fellowship**2019:** International Parkinson’s Disease and Movement Disorders’ Society (MDS) LEAP program**2019:** TechWomen Emerging Leader program **2019**: The best pitch presentation for community impact project on developing mobile app and an outreach program for mental health in Jordan at TechWomen program |
| **Scholarships** |
| **2008- 2012:** Scholarship from Jordan University of Science and Technology for PhD study in Cardiff University in the UK. **2008 to 2012:** The Cardiff University Overseas Research Student (ORS) award/ paid the difference in tuition fees between international student fee and local student fee.**2006-2007:** Full scholarship from Jordan University of Science and Technology to complete MSc study at Cardiff University in the UK. |
| **Memberships** |
| Member of Jordanian Physical Therapy Association (JPTA) (2005 till present)Member of the International Movement Disorders Society (MDS) (2013 till present)Associate member of the International Neurological Physical Therapy Association (INPA) (2015 till present)Associate member of Association of Physiotherapists in Parkinson's disease Europe (APPDE) (2014 till 2017)Member of European Huntington’s Disease Network (EHDN) (2008 till 2013) |
| **Previous and other appointments** |
| **September 2018- till present:** Vice dean, faculty of applied medical sciences, Jordan university of science and technology.**October 2017:** Associate professor, University of Science and Technology, Faculty of Applied Medical Sciences, Irbid-Jordan**October 2012- September 2017:** Assistant professor, University of Science and Technology, Faculty of Applied Medical Sciences, Irbid-Jordan. **Oct 2008-July 2012:** Full time PhD sponsored student, Cardiff University, School of Health Care Studies, Cardiff (scholarships from Jordan University of Science and Technology and the Cardiff University Overseas Research Student (ORS) award).**2007-2008:** Lecturer, Jordan University of Science and Technology, Faculty of Applied Medical Sciences, Irbid-Jordan **2006-2007:** Full time MSc sponsored student, Cardiff University (Full scholarship from Jordan University of Science and Technology) **2005-2006:**  Full Time Teaching Assistant, Jordan University of Science and Technology, Faculty of Applied Medical Sciences, Irbid-Jordan**2000 – 2004:** Full time BSc student, Jordan University of Science & Technology (J.U.S.T)BS Physical Therapy (honours in 5 semesters) |
| **Administrative services held** |
| **September 2018- till present:** Vice dean, faculty of applied medical sciences, Jordan university of science and technology.**September 2018-till September 2019:** head of scientific research committee, faculty of applied medical sciences, Jordan university of science and technology.**September 2017-September 2018:** a member of the scientific research committee, faculty of applied medical sciences, Jordan university of science and technology.**September 2017-September 2018:** a member of the academic curriculum committee, department of rehabilitation sciences, faculty of applied medical sciences, Jordan university of science and technology.**September 2016- August 2017:** a member of the scientific research committee, department of rehabilitation sciences, faculty of applied medical sciences, Jordan university of science and technology.  **September 2015- September 2016:** Dean assistant, faculty of applied medical sciences, Jordan university of science and technology.**September 2014- September 2015:** Representative of faculty of applied medical sciences in the university council committee, Jordan university of science and technology**September 2013-September 2015:** a member of the community service committee at the faculty of applied medical sciences. Jordan university of science and technology **September 2012-September 2013:** representative of department of rehabilitation sciences in the council committee of faculty of applied medical sciences, Jordan university of science and technology. |
| **Professional services held** |
| 1. **April 2018 till present:** A member of the World Confederation of Physical Therapy (WCPT) Education Policy and Guidelines Review Expert Working Group.
2. **September 2019 till 2021:** a member of the Middle East Working Group (MEWG) Steering Committee for the international Parkinson’s disease and movement disorder society.
3. **September 2019 till 2021:** A member of the **AOS**EducationCommittee for the international Parkinson’s disease and movement disorder society.
4. **June 2017 till present:** Vice president of the Jordanian Physiotherapy Society.
5. **January 2016 till present:** A member of the international Parkinson’s disease and movement disorder society (MDS) of MDS Arabic translation team.
6. **September 2016 till present:** A member of the international movement disorder society (MDS) task force for the Middle East.
7. **March 2013-March 2014:** Scientific committee at the Jordanian Physiotherapy Society.
8. **December 2012- February 2013:** A member of a committee formed by ministry of health to reform policies of physiotherapy profession practices in Jordan.

  |
| **Journal reviewer**  |
| 1. Archive of Physical Medicine and Rehabilitation Journal (obtained certificate of *Elite Reviewer for 2017 reviews*)
2. Movement Disorders Clinical Practice
3. Gait and Posture Journal
4. Disability and Rehabilitation
5. Physiotherapy Theory and Practice
6. The First Scientific Jordanian physical therapy association conference
 |
| **Grant reviewer**  |
| * Provided grant review for MS Society- UK
 |
| **Research training (received)** |
|

|  |  |
| --- | --- |
| 2019 | 1. The DAAD DIES ProGRANT Proposal Writing for Research Grants (3 phases; sponsored by the German Academic Exchange Service (DAAD))
 |

|  |  |
| --- | --- |
| 2015-2016 | 1. Fellowship training in responsible research conduct (RCR) within the program of The Research Ethics Education Program in Jordan (REEP) in a project that is led by the University of California San Diego in collaboration with JUST (duration 1 year)
 |
| 2010 | 1. Statistical approaches in life sciences (6 parts)- Cardiff University, UK
2. Developing systematic way of literature review- Cardiff University, UK
3. Presentation skills- Cardiff University, UK
4. Creative note taking for researchers, Cardiff University, UK
5. Effective researcher skills, Cardiff University, UK
 |
| 2009 | 1. Quantitative and Qualitative Research (8 parts- Cardiff university, UK)
2. Motivational Interviewing (Introduction methods and integration- Cardiff, UK)
 |
| 2008 | 1. Applying Statistics in Biomedical Research (5 parts- Cardiff University, UK)
2. SPSS: an introduction (2 parts- Cardiff University, UK)
3. Research Ethics 1: Governance (Online Course)
4. Research Ethics 2: Working with Human Subjects (Online Course)
5. Good Clinical Practice (GCP) (Research clinical Facility- University Hospital of Wales)
6. Communication skills in research (CRC CYMRU, Cardiff)
 |
| 2006-2007 | 1. 30 credit M-level module: Research Methods in Health and Social Care
2. 10 credit M-level module: Qualitative research methods
 |

 |
| **Clinical training (received)** |
|

|  |  |
| --- | --- |
| 2016 | 1. Basic Vestibular Rehabilitation: An Evidence Based Course with Practical Intervention. Susan L.Whitney. Amman-Jordan

  |
| 2015 | 1. Stroke: arm recovery in severe paresis- WCPT course- Singapore
 |
| 2014 | 1. First Middle East camp for Parkinson's disorders and neuromodulation- Dubai, UAE
2. 2nd annual allied health professional summer school in Parkinson's disease- Lisbon.
3. Clinical manual therapy of upper and lower extremities- Amman, Jordan
 |
| 2013 | 1. Movement with mobilization (Mulligan concept): part A and B- Amman, Jordan MecKinzi course (Part A) Lumbar spine. Amman, Jordan
2. Evidence-based physical therapy intervention for people with Parkinson's disease (Online course- APTA learning centre)
3. Differential diagnosis and management of the cervicogenic headache- Amman, Jordan.
 |
|  | 1. Introductory bobath course- part1: normal movement- Ebbw Vale, UK.
2. Introductory to bobath course-part 2: the assessment and treatment of adults with neurological conditions- Ebbw Vale, UK
3. Introductory to bobath course- part 3: management of acute and sub-acute patient-UK.
 |

 |
| **Teaching experience**  |
| **September 2017 till present:** provided coordinating and teaching the following master courses: research methods in rehabilitation sciences, applied biostatistics, clinical education in rehabilitation, motor learning and motor control, and advanced neurological rehabilitation, advanced neurosciences.  **September 2012 till present:** provided coordinating and teaching the following Bsc courses: neurosciences, neurological physical therapy, clinical practice in neurological physical therapy, surgical physical therapy, introduction into clinical medicine in physical therapy, musculoskeletal assessment and therapeutic exercises, department of rehabilitation sciences, Jordan university of science and technology, Irbid, Jordan.**September 2007 till September 2008:** Provided teaching for the following courses: paediatrics in physical therapy, therapeutic exercises, clinical placements in physical therapy, Department of rehabilitation sciences, Jordan university of science and technology, Irbid, Jordan.**Teaching responsibilities for the above courses included:** 1. Setting courses learning outcomes
2. Preparing learning and teaching material
3. Conducting teaching for theoretical and practical classes
4. Preparing evaluation and exam material
5. Conducting exams

  |
| **International teaching/research experience**  |
| **February 26th to March 2nd 2018:** Undertaking Erasmus+ teaching staff activities which was funded by the EU at Hacettepe University, Department of Physical Therapy, Turkey. **September 28th to November 3rd 2019:** Teaching/ research exchange activities at University of California, San Francisco (UCSF), USA, as part of Techwomen program.  |
| **Curriculum reform and academic programs’ accreditation experiences**  |
| 1. **2017-present:** a member of departmental committee to reform the Bsc curriculum in physical therapy at JUST.
2. **2016- present:** co-coordinator for on-going Erasmus Plus fund (971.250 EU) for establishment of a newly master program in interdisciplinary clinical rehabilitation sciences in partnership with 5 other universities (2 universities from Jordan and 3 universities from Europe) in which a bologna process reform is being carried out.
3. **2016- 2018:** Leading activities to obtain the World Congress of Physical Therapy (WCPT) accreditation for the Bsc program of physical therapy at JUST.
4. **2013:** A member ofdepartmental committee to reform the Bsc curriculum in physical therapy at JUST.
 |
| **International clinical courses ’coordination experiences**  |
| 1. **Course director** of the allied health track at the 4th Middle East camp of Parkinson’s disease and movement disorders. December 2019. Dubai-UAE [course organized by the international Parkinson’s disease and movement disorders society (MDS)]
2. **Course director** of the allied health track at the 3rd Middle East camp of Parkinson’s disease and movement disorders. October 2017. Dubai-UAE [course organized by the international Parkinson’s disease and movement disorders society (MDS)]
3. **Course organizer** of the neurological rehabilitation diploma: March to May 2017. Amman – Jordan [course sponsored by Prime-Physio-Sheffield-UK]
4. **Course director** of Rehabilitation update in Parkinson’s disease: May 2016. Amman-Jordan [course organized and sponsored by the international Parkinson’s disease and movement disorders society (MDS)]
 |
| **International conference organization/chair experience**  |
| **Chair of the scientific committee** for the 4th International Conference of The Jordanian Physical Therapy Society. June 2018, Amman, Jordan.**Chair of a neurology session** for the World Congress of Physical Therapy, May 2019, Geneva, Switzerland.**Abstract reviewer** for the World Congress of Physical Therapy, May 2019, Geneva, Switzerland.  |
| **Para-academic activities**  |
| **March 2018:** A member of judge panel for “the first Innovation Olympiad” in the sector of the Information Technology in Health which was organized by the The Centre of Excellence for Innovative Projects at Jordan University of Science and Technology. |
| **Research interest**  |
| My research interests include refining the rehabilitation practices related to Long term chronic neurological conditions (LTCNs) namely multiple sclerosis (MS) and Parkinson’s disease (PD) in Jordan. The specific objective is to develop approaches to maximizing opportunities for these patients to engage in exercise. My further research interest includes movement analysis, motor learning and motor control in these populations. I am also interested in pursuing physiological mechanistic of the effect of regular exercise participation in people with MS and PD. Over the last 6 years, I have published several peer-reviewed articles and participated in numerous conference presentations (including invited oral presentations) on the topic of physical rehabilitation for people with neurodegenerative diseases. I successfully obtained seed funding (as a principal investigator) for several studies (both observational and interventional) in the field of neurological rehabilitation for people with MS and PD. I also have conducted and published additional descriptive studies of barriers to exercise participation among people with progressive neurological disease in Jordan. I am currently also leading a book chapter concerning about challenges in the management of LTNCs in Arab countries. My current and future research plans are to secure funding of a large multi-site, intervention trial to address barriers to people with LTNCs in Arab countries to get engaged in exercise including patient education and physician referrals. Strategies which I am currently pursuing include empowering patients with LTCNc with self-management approaches to get engaged in exercise. This includes design and evaluation of print, video-based and online-based and mobile applications materials that are tailored to gender, culture, and information processing. I am also interested in building and maintaining collaborative work between: multi-disciplinary academics; clinicians and other health care professionals; and patient advocates. The aim finally is to conduct participatory research that actively engages multiple stakeholders in the research planning, implementation, evaluation, and dissemination process to enhance the likelihood that the work will be sustained and replicated in other settings nationally and regionally. |
| **Master thesis student supervision**  |
| 1. Return to work following a stroke: influential predictors in accordance with occupational therapy practice framework [Main supervisor (student name; Huda Alboriny)]-[completed]
2. The impact of the motor and non-motor factor on participation in instrumental activities of daily living and leisure in patient with multiple sclerosis [Main supervisor (student name; Eman Malkawi)]-[complete]
3. Physical Activity in Multiple Sclerosis: Which Clinical Characteristics Are Important? [Main supervisor (student name; Shatha Kazaaleh)]-[completed].
4. The relationship between sleep quality, cognition and depression with motor learning in people with multiple sclerosis. [Co- supervisor (student name; Heba Khazaaleh)]-[completed]
5. The relationship between motor skill acquisition, sleep quality, cognition and related-biomarkers in people with Parkinson’s’ disease. [Co- supervisor (student name; Ismail Alhaj)]-[completed]
6. The effect of dual tasking on walking in people with multiple sclerosis: which clinical and personal characteristics are important? [Co- supervisor (student name; Walla Azayzeh)]-[ongoing]
7. The association between pain, pain biomarkers and physical activity in people with Parkinson’s disease [Main supervisor (student name; Nesreen Alyahya)]-[completed]
8. The association between oxidative stress and sleep deficits in people with multiple sclerosis. [Co-supervisor (student name; Ahmad Namarneh)]-[completed]
9. The association between sleep deficits, sleep biomarkers and physical activity in people with multiple sclerosis. [Main supervisor (student name; Aseel Aburub)]-[completed]
10. Interaction between brain derived neurotraphic factor, physical activity and cognitive function in people with Parkinson’s disease. [Main supervisor (student name; Aya Al-Hishan)]-[completed]
11. Interaction effect between brain derived neurotrophic factor, physical activity and cardiovascular disease in people with Parkinson’s disease. [Co-supervisor (student name; Esraa Darisheh)]-[completed]
 |
| **Funded projects** |
| 1. Return to work following a stroke: influential predictors in accordance with occupational therapy practice framework (5310 JD) (PI-funded by JUST) (completed)
2. Physical Activity in Multiple Sclerosis: Which Clinical Characteristics Are Important? (5459 JD) (PI-funded by JUST) (completed)
3. The impact of the motor and non-motor factor on participation in instrumental activities of daily living and leisure in patient with multiple sclerosis (4185 JD) (PI-funded by JUST) (ongoing)
4. Association between magnesium levels and mental and body well-being in community- dwelling adults in Jordan (9966 JD) (PI-funded by JUST) (ongoing)
5. Association between magnesium levels and mental and body well-being in neurodegenerative disease. (8850 JD) (PI- funded by JUST) (ongoing).
6. Association between magnesium levels and mental and body well-being in community dwelling adults in Jordan and in people with neurodegenerative disease. (10000 Euro); (PI: Co-funded by L’Oréal UNESCO For Women In Science Levant fellowship) (ongoing)
7. Relationship between insulin resistance, cognitive function and physical activity in people with multiple sclerosis. (5700 JD); (PI-funded by JUST) (ongoing).
8. Establishment of an Interdisciplinary Clinical Master Program in Rehabilitation Sciences at JUST (JUST – CRS). (971,250.00 EU); (Co-PI- funded by the European commission through Erasmus Plus funding scheme) (Ongoing)
9. Transcranial electrical stimulation in children with Autism. (126,000.00JD); (Co-PI- funded by Jordanian Scientific Fund) (Completed).
10. The relationship between pain, physical activity and blood biomarkers in people with Parkinson's disease. (6000 JD) (PI-Funded by JUST) (Completed).
11. Enhancement of Physiotherapy programs through networking in conflict affected territories/countries (Jordan, Iraq, West Bank, Gaza, and Lebanon). (700,000.00 USD); (Focal point of Jordan University of Science and Technology for the project- Funded by USAID; JUST share 31000 USD) (Completed)
12. Understanding the Perception of Physical Therapists and Occupational Therapists in Jordan about the Importance of Sleep in the Rehabilitation and Motor Learning: A Survey Study. (4000 JD) (Co- PI- Funded by JUST) (Completed)
13. The effect of aerobic exercise on serum and saliva melatonin and cortisol, sleep disturbances, fatigue, depressive symptoms, and ambulatory function in individuals with multiple sclerosis (15000) (Co- PI- Funded by JUST) (completed)
14. The relationship between antioxidant gene (NRF2), sleep disturbances and physical activity in individuals with multiple sclerosis (MS) (6000 JD) Understanding Motor Learning in Patients with Multiple Sclerosis (9000 JD) (Co- PI- Funded by JUST) (Completed)
15. Understanding Motor Learning in Patients with Multiple Sclerosis (9000 JD) (Co- PI- Funded by JUST) (completed)
16. Transcranial electrical stimulation in people with PD. (30000 JD); (Co-PI- funded by JUST) (completed)
17. Career pathways and professional satisfaction: A follow-up study of applied medical sciences graduates of the Jordanian Universities (2000 JD) (PI-funded by JUST) (Completed).
18. Virtual Reality Based Motor Control Learning for People with Multiple Sclerosis: A Pilot Study (25000 EU); (PI-funded by EU commission (Support to Research and Technological Development & Innovation initiatives and Strategies in Jordan scheme) (Completed).
19. The association between physical activity with cognitive function and brain derived neurotrophic factor in people with Parkinson's disease (5000 JD) (PI- funded by JUST) (Completed).
20. Gait variability and risk of falls in people with multiple sclerosis (MS): which clinical characteristics are important? (10000 JD) (PI- Funded by JUST) (Completed).
21. The association between physical activity and sleep deficits and biomarkers in patients with multiple sclerosis (6000 JD); (PI-funded by JUST) (Completed).
22. Feasibility study of home-based exercise programme to improve mobility and quality of life in people with Parkinson's disease (15000 JD); (PI-funded by JUST) (Completed).
 |
| **Relevant publications** |
| **Published papers** 1. **Khalil H**, Chahine L, Siddiqui J, Aldaajani Z, Bajwa JA. Insights into Parkinson's Disease in the Middle East, North Africa and South Asia. The Lancet Neurology 2020 (accepted)
2. **Khalil H**, Al-Sharman A, Alghwiri A, Abdo N, El-Salem K, Shalabi S, Aburub A. Cross cultural adaptation and psychometric evaluation of an Arabic version of the modified fatigue impact scale in people with multiple sclerosis. Multiple Scelerosis and Related Disorders.2020. 39 (101878).
3. Alghwiri A, **Khalil H**, Al-Sharman A, El-Salem K. Psychometric properties of the Arabic Activities-specific Balance Confidence Scale in people with multiple sclerosis: reliability, validity, and minimal detectable change. NeuroRehabilitation. 2019 (accepted).
4. Al-Sharman A, **Khalil H**, El-Salem K, Alghwiri AA, Khazaaleh S, Khraim M. Motor performance improvement through virtual reality task is related to fatigue and cognition in people with multiple sclerosis. Physiother Res Int. 2019. doi: 10.1002/pri.1782. [Epub ahead of print].
5. Al-Sharman A, **Khalil H**, El-Salem K, Aburub A, Aldugmi M. The effects of aerobic exercise on subjective and objective sleep measures as well as sleep-related biomarkers in individuals with Multiple Sclerosis: a pilot randomised controlled trial. NeuroRehabilitation. 2019. [accepted].
6. **Khalil H**, AlSharman A, El-Salem K, Algwiri A, Al-Shorafat D, Khazaaleh S, Abu foul L. The Development and Pilot Evaluation of Virtual Reality Balance Scenarios in People with Multiple Sclerosis (MS); a Feasibility Study. NeuroRehabilitation. 2018; 43(4): 473-482
7. Alomari M, **Khalil H,** Khabour O, Wood R. Cardiovascular Function is Related to Neuromuscular Performance in Parkinson’s Disease. Neurodegenerative disease management. 2018. 8 (4).
8. Hadoush H, Al-Sharman, **Khalil H** A Bani-Hani S, Al-Jarrah M. Sleep Quality, Depression, and Quality of Life After Bilateral Anodal Transcranial Direct Current Stimulation in Patients with Parkinson’s Disease. Medical Science Monitor Basic Research. 2018.19 (24):198-205.
9. Alomari M, **Khalil H,** Khabour O, Alzoubi K, Dersieh E. Altered cardiovascular function is related to reduced BDNF in Parkinson’s disease. Experimental aging research. 2018. 44; 3.
10. Alqwiri A, **Khalil H**, Al-Sharman A, El-Salim K. Depression is A Predictor for Balance in People with Multiple Sclerosis. Journal of Multiple Scelerosis and Related Disorders. 2018. 26(24):28-31.
11. Hadoush H, Bani-Hani S, **Khalil H**, Al-Sharman A, Al-Jarrah M. Dopamine, BDNF and motor functions post bilateral anodal transcranial direct current stimulation in Parkinson's disease. Neurodegenerative disease management, 2018. 8 (3):171-179.
12. Al-Sharman A, **Khalil H**, Nazzal M, Al-Sheyab N, Alqwiri M, El-Salim K. Living with Multiple Sclerosis: A Jordanian perspective. Physiotherapy Research International. 2018.23(2):e1709.
13. Hadoush H, Al-Jarrah M, **Khalil H**, Al-Sharman A, L-Ghazawi S. Bilateral anodal transcranial direct current stimulation effect on balance and fearing of fall in patient with Parkinson's disease. NeuroRehabilitation. 2018;42 (1):63-68.
14. **Khalil H,** Alomari M, Khabour O, Heishan A, Bajwa J. The association between physical activity with cognitive function and brain derived neurotrophic factor in people with Parkinson’s disease**,** a pilot study. Journal of aging and physical activity. 2017. 15:1-7.
15. Fritz N, Busse M, Jones K, **Khalil H**, Quinn L, and the Members of the Physiotherapy Working Group of the European Huntington’s Disease Network. A Classiﬁcation System to Guide Physical Therapy Management in Huntington Disease: A Case Series. [Journal of neurologic physical therapy.](https://www.ncbi.nlm.nih.gov/pubmed/28628549) 2017;41(3):156-163.
16. **Khalil H**, Al-Shorman A. Algwiri A, El-Salem K, Aburub A, Shalabi S. Fear of falls in people with multiple scelerosis, which clinical characteristics are important. Physical therapy. 2017. 97(7):698-706.
17. **Khalil H,** Busse M, Quinn L, Nazzal M, Khazaaleh S, Batyha W, Alomari M. A pilot study of a minimally supervised home exercise and walking program for people with Parkinson's disease in Jordan. Neurodegenerative disease management. 2017. 7 (1):73-84.
18. Aburub A, **Khalil H**, Al-Shorman A, Alomari M, Khabour O. The association between physical activity and sleep characteristics in people with multiple sclerosis. Multiple sclerosis and related disorders. 2017. 12: 29-33
19. Nazzal M, **Khalil H**. Living with Parkinson’s disease: A Jordanian perspective. Scandinavian journal of occupational therapy. 2017. 24 (1): 74-82.
20. **Khalil H,** Alomari M, Khabour O, Heishan A, Bajwa J. Relationship of circulatory BDNF with cognitive deficits in people with Parkinson's disease. Journal of the neurological sciences. 2016. 362:317-320.
21. **Khalil H**, Nazzal M, Al- Sheyab N. Parkinson's disease in Jordan: Barriers and motivators to exercise. Physiotherapy Theory and Practice. 2016. 32 (7): 509-519.
22. **Khalil H**, Bajwa J. Barriers and facilitators in physical rehabilitation for Parkinson’s disease in the Arabian World. Movement Disorders Clinical Practice. 2015. 2: 227–229.
23. Collett J, Esser, P, **Khalil H**, [Busse M](http://orca.cf.ac.uk/view/cardiffauthors/A0543274.html), [Quinn L](http://orca.cf.ac.uk/view/cardiffauthors/A128942Z.html), [DebonoK](http://orca.cf.ac.uk/view/cardiffauthors/A117647N.html), [RosserA,](http://orca.cf.ac.uk/view/cardiffauthors/A043007A.html) NemethA, Dawes H. Insights into gait disorders: Walking variability using phase plot analysis, Huntington's Disease. Gait & Posture. 2014. 40 (4): 694-700.
24. [Busse M](http://orca.cf.ac.uk/view/cardiffauthors/A0543274.html), Quinn L, **Khalil H**, McEwa K. Optimising mobility outcome measures in Huntington's disease. Journal of Huntington's Disease. 2014. 3 (2): 175-88.
25. **Khalil H**, Quinn L, van Dursen R, Dawes H, Playle R, Rosser R, Busse M. What effect does a structured exercise program have on people with Huntington's disease? A randomised controlled study of a home-based programme. Clinical Rehabilitation; 2013. 27(7):646-58.
26. Quinn L, **Khalil H**, Dawes H, Fritz N, Kegelmeyer D, Kloos A, Jonathan Gillard, Busse M, and the Physiotherapy Working Group of the European Huntington’s Disease Network. Reliability and Minimal Detectable Change of Physical Performance Measures in Individuals With Pre-manifest and Manifest Huntington Disease. Physical Therapy; 2013. 93(7):942-56.
27. **Khalil H**, Quinn L, van Deursen R, Martin R, Rosser A, Busse M. Adherence to use of a home-based exercise DVD in people with Huntington’s disease: participants’ perspectives. Physical Therapy, 2012; 92 (1): 69-82.
28. Busse M, **Khalil H**, Quinn L, Rosser AE. Practice, Progress and Future directions for Physical Therapies in Huntingtons Disease. Journal of Huntington’s disease. 2012; 1 (2): 175-185.
29. Dalton A, **Khalil H**, BusseM, Rosser A, van DeursenR, Laighin R. Analysis of gait and balance through a single triaxial accelerometer inpresymptomatic and symptomatic Huntington’s disease. Gait and posture. 2012; 37(1):49-54.
30. Quinn L, Busse M, **Khalil H**, Richardson S, Rosser A, Morris H. Client and therapist views on exercise programmes for early-mid stage Parkinson's disease and Huntington's disease. Disability and Rehabilitation. 2010;32(11):917-28.
31. Busse M, **Khalil H**, Quinn L, Rosser A. Physical Therapy Intervention for Patients with Huntington’s disease. Physical Therapy. 2008; 88 (7):820-31

**Published abstracts** Khalil H, L. Chahine L, Siddiqui J, Salari M, El-Jaafary S, Aldaajani Z, Abu Al-Melh M, Mohammad T, Abu Snineh M, Syed N, Bhatt M, Habahbeh M, Tabbal S, Jeon B, Bajwa J. Parkinson’s disease in Middle East, North Africa and South Asia: Consensus from the MDS Task Force on the Middle East. [abstract]. Mov Disord*.* 2019; 34 (suppl 2). Khalil H, Al-Yahya N, Al-Sharman A, Alqudah M, El-Salem K. The Circulatory Levels of Serotonin, Beta endorphin and Dopamine and their relations to Pain Perception in People with Parkinson’s Disease. [abstract]. Mov Disord. 2019; 34 (suppl 2).1. El-Salem K, Alsharman A, **Khalil H**, Alghwiri A. Understanding Motor Performance in People with Multiple Sclerosis Using Virtual Reality [abstract]. Neurology. 2019; 92 (15 Supplement)
2. Alsharman A, **Khalil H**, Alghwiri A, El-Salem K, Aburub A, Al-Shorafat D, Al-Shalabi S. Arabic Modified Fatigue Impact Scale: Validity and Reliability in People with Multiple Sclerosis [abstract]. Neurology. 2019; 92 (15 Supplement)
3. El-Salem K, Alsharman A, **Khalil A**, Al-Shorafat D, Esser P, Dawes H. The Extent of the Relationship between Sleep Disturbances and walking ability in People with Multiple Sclerosis [abstract]. Neurology. 2019; 92 (15 Supplement).
4. **Khalil H**, Al-Sharman A, Alissa N, El-Salem K, Al-Shorofat D. The association between pain and physical activity in people with Parkinson's Disease (PD). [abstract]. Mov Disord. 2018; 33 (suppl 2)
5. **Khalil H**, Al-Sharman A, Alissa N, El-Salem K, Al-Shorofat D. The validity of the Arabic King's PD Pain Scale in people with Parkinson’s disease [abstract]. Mov Disord. 2018; 33 (suppl 2)
6. **Khalil H**, Z. Aldaajani, S. Baudry, M. Abualmelh, T. Mohammad, M. Salari, M. Bhatt, S. Tabbal, N.A. Syed, B. Jeon, C. Goetz, J.A. Bajwa. The management of Parkinson’s disease in the Middle East countries: the MDS-middle east task force survey [abstract]. Mov Disord*.*2017; 32 (suppl 2).
7. Algwiri A, **Khalil H**, Al-Shorman A. Reliability and validity of the Arabic Activities-specific

Balance Confidence scale in people with multiple sclerosis study [abstract]. Multiple Sclerosis Journal. 2016. S1:1-24. 1. Aburub A, **Khalil H**, Al-Shorman A, Batayha W. The association between physical activity and sleep deficits and biomarkers in patients with multiple sclerosis [abstract]. Multiple Sclerosis Journal. 2016. S1:1-24.
2. Al-Shorman A, **Khalil H**, Nazzal M, Algwiri A, El-Salem K. Perspective and experiences of Jordanian people with multiple sclerosis—A qualitative study [abstract]. Multiple Sclerosis Journal. 2016. S1:1-24.
3. Alomari M A, **Khalil H**, Khabour O F, Dersieh E, Bajwa J A. Relationship of muscular strength with cardiovascular function in Parkinson’s disease [abstract]. Mov Disord. 2016; 31 (suppl 2).
4. **Khalil H**, Alomari M A, Khabour O F, Al-Hieshan A, Bajwa J A. Circulatory levels of BDNF correlate with cognitive deficits in people with Parkinson’s disease [abstract]. Mov Disord.2016; 31 (suppl 2).
5. **Khalil H**, Al-Sharman A, Kazaaleh S, El-Salem K. The Development of Virtual Reality (VR) Balance Scenarios to Improve Balance in People with Multiple Sclerosis (MS) [abstract]. ECTRIMS online library; 145683. 2016

Khalil H, Al-Shorman A, Alomari M, Aburub A, Batayha W, Darwish M. [The comparative ability of three physical function tests for predicting physical activity levels in people with parkinson's disease](http://www.sciencedirect.com/science/article/pii/S0031940615036408) [abstract]. Physiotherapy 2015; 101, Suppl 1, e742-e743. Al-Shorman A, Khalil H,Alomari M, Aburub A, Batayha W, Darwish M. [Sleep latency is a predictor of physical function and physical activity in individuals with Parkinson's disease](http://www.sciencedirect.com/science/article/pii/S0031940615002138) [abstract].Physiotherapy 2015; 101, Suppl 1, e61-e62.1. Mohammad, T, Mujtaba A, Al-Angari R, Al-Shammari N, Al-Qurashi, A, Bashir M.S, **Khalil H**, Bajwa J.A. Is exercise compliance, perception and practices different among Parkinson's disease motor subtypes? [abstract]. Movement Disorders 2015;30Suppl 1 :274.
2. Mohammad T, Mujtaba A, Angari R, Shammari  N, Quraishi A, Bashir M, **Khalil H**, Bajwa J.A. Patient perceptive feedback regarding participation in a rehabilitation program and its relation to adherence in Parkinson's disease [abstract]. Movement Disorders 2015;30Suppl 1 :272.
3. Mohammad T, Al Angari R, Mujtaba A ,Al Shammari N, Al Quraishi A, Bashir M, **Khalil H**, Bajwa J.A. Perception toward exercise and its relation to rehabilitation exercise adherence in Parkinson's disease (PD) [abstract]. Movement Disorders 2015;30Suppl 1 :272.
4. Bajwa J.A, **Khalil H**. First Middle East camp for Parkinson's disease, Movement Disorders and neuromodulation: Review of outcomes and implications for future directions [abstract]. Movement Disorders 2015;30Suppl 1 :971.
5. **Khalil H**, Bajwa J.A. Finally it's time for a perspective: Barriers and facilitators in physical rehabilitation for Parkinson's disease from the Arabian Peninsula [abstract]. Movement Disorders 2015;30Suppl 1 :695.
6. **Khalil H**, Nazzal M, Al-Sheyab N. Exploring practices and perceptions toward exercise among PD patients in Jordan [abstract]. Movement Disorders 2014; 29 Suppl 1 :426
7. **Khalil H**, [Quinn L](http://orca.cf.ac.uk/view/cardiffauthors/A128942Z.html), [Van Deursen R, William Martin](http://orca.cf.ac.uk/view/cardiffauthors/A054862W.html), Dawes H, [Playle R](http://orca.cf.ac.uk/view/cardiffauthors/A000516V.html), [RosserA](http://orca.cf.ac.uk/view/cardiffauthors/A043007A.html), [Busse M](http://orca.cf.ac.uk/view/cardiffauthors/A0543274.html). Q15 A pilot study of an exercise intervention to improve motor function in people with Huntington's disease (HD) [Abstract]. Journal of Neurology, Neurosurgery and Psychiatry.2012; 83 (S1) , A59.
8. **Khalil H**, van Deursen R, Quinn L, Rosser A, and Busse M.F18 Clinical measurement of sit to stand performance in people with Huntington’s disease: reliability and validity for 30 seconds chair sit to stand test [abstract]. Journal of Neurology, Neurosurgery & Psychiatry. 2010; 81: A28.
9. **Khalil H**, Dalton A, van Deursen R, Rosser A, Ó LaighinG, Busse M. F17 The Use of an Accelerometer to Evaluate the Performance of Timed Up and Go Test in Pre-symptomatic and Symptomatic Huntington’s Disease in European Huntington's Disease [abstract]. Journal of Neurology, Neurosurgery & Psychiatry. 2010;81:A28.
 |
| **Participation in regional and international conferences**  |
| 1. 23rd International Parkinson’s disease and movement disorders congress; Nice, France. September 2019. [Abstract presentations].
2. World Congress of Physical Therapy (WCPT); Geneva, Switzerland, May 2019/ poster presentation.
3. World Congress of Physical Therapy (WCPT); Cape town-South Africa, June 2017/ platform presentation.
4. 32 nd congress of European Committee for Treatment and Research in Multiple Sclerosis (ECTRIMS). London- UK, September 2016/abstract presentation
5. 20th International Parkinson's disease and movement disorders (MDS) congress; Berlin-Germany, June 2016/ abstract presentation
6. 2nd MENA- Committee for Treatment and Research in Multiple Sclerosis (MENACRTIMS) congress. Amman-Jordan, March 2016./ abstract presentation
7. World Congress of Physical Therapy (WCPT) congress; Singapore, May 2015/ abstract presentation.
8. 2 nd middle east camp for Parkinson's disease, movement disorders and neuromodulation. Dubai- UAE, November, 2015/ forum presentation
9. 18th International Parkinson's disease and movement disorders (MDS) congress; Stockholm, Sweden, June 2014/ abstract presentation
10. 7th European Huntington’s disease network congress. Stockholm- Sweden. September 2012/abstract presentation
11. South West Regional Regenerative Medicine Meeting. Bristol-UK, September 2011/ forum presentation
12. World Congress of Physical Therapy (WCPT) congress. Amsterdam-Netherland, June 2011/ abstract presentation
13. 10th European Huntington’s disease network (EHDN) plenary meeting. Prague- Czech Republic. September 2010/ abstract presentation
14. NEURODEM annual conference, Cardiff-UK, June 2009/ forum
15. World Congress on Huntington’s Disease, Dresden-Germany, September 2007/ abstract presentation
 |
| **Selected invited presentations** |
| 1. Experience in project management for Erasmus Plus Capacity Building in Higher Education action, Jordan European Union Higher education cooperation day. Amman, Jordan, October 2017.
2. Rehabilitation techniques in PD: What can a neurologist do?. 2nd Middle East camp of Parkinson's disease, movement disorders and neuro-modulation; Dubai, November 2015.
3. Updates on Parkinson’s disease rehabilitation. 2nd conference of Jordanian physical therapy association. Amman- Jordan. February 2013.
4. Exercise in neurodegenerative disease. School of medicine/ departments of neurology and psychological medicine annual meeting; Cardiff-UK, June 2011.
5. The evaluation of a home based exercise programme for people with Huntington’s disease. EHDN Physiotherapy working group annual meeting; Leiden-Netherlands, June 2011.
6. The development and evaluation of a home use exercise DVD for people with Huntington’s disease. School of Health care Studies annual conference; Cardiff-UK, November 2010.
7. Physiotherapy for people with Huntington’s disease. Huntington’s Disease association South Wales AGM annual meeting; Cardiff-UK, July 2010.
8. Exercise for people with Huntington’s disease. Huntington’s Disease Cognitive Rehabilitation Working Group; Cardiff-UK, March 2010.
9. Feasibility of a home based physiotherapy training program in Huntington’s disease (background and study design). European Huntington’s Disease Network Physiotherapy Working Group; Cardiff-UK, February 2009.
 |
| **Presentation’s awards and received recognitions**  |
| 1. Winning the 2018 L’Oréal UNESCO For Women In Science Levant fellowships.
2. Received recognition from the EU/Jordan in the International Women day on performance on an EU funded study in which a virtual reality system for motor control training for people with movement disorders was developed.
3. Best poster prize at the 2nd MENA- Committee for Treatment and Research in Multiple Sclerosis (MENACRTIMS) congress, March 2016. Amman-Jordan.
4. Best presentation prize at the South West Regional Regenerative Medicine Meeting. Bristol University, Bristol, September 2011. The prize was sponsored by the UK National Stem Cell Network (NSCN).
 |
| **System development** |
| Developed a virtual reality system that can be used for both motor control training and biomechanical assessment for people with movement disorders. This work was accomplished as a result of a project that was funded by the European Union (25,000 EU) (Support to Research and Technological Development & Innovation initiatives and Strategies in Jordan scheme). A business plan is under writing which will be submitted to JUST incubator to work on commercialization the system. |
| **Contribution to published clinical guidelines** |
| 1. Adult Physiotherapy manual for the centre of victim of torture (under revision).
2. Physiotherapy Clinical Guidelines in Huntington’s Disease (2013) in European Huntington’s disease network (EHDN).
3. Quinn, L. and Busse, M. On behalf of the European Huntington’s Disease Network Physiotherapy Working Group. [Development of physiotherapy guidance and treatment-based classifications for people with Huntington's disease](http://orca.cf.ac.uk/17846). Neurodegenerative Disease Management; 2012: 2(1), pp. 11-19.
4. Quinn, L. and Busse, M. On behalf of the European Huntington’s Disease Network Physiotherapy Working Group [Physiotherapy clinical guidelines for Huntington’s disease](http://orca.cf.ac.uk/21819). Neurodegenerative Disease Management; 2012: 2(1), pp. 21-31.
 |
| **Translation work into Arabic language**  |
| 1. A member of the movement disorder society (MDS) of MDS Arabic translation team; provided translation and pre-cognitive testing for the MDS- Unified Parkinson’s Disease Rating Scale (MDS-UPDRS) and MDS- Unified Dyskinasia Rating Sacle (MDS-UDysRS) (Ongoing).
2. Provided translation into Arabic language for MDS patients’ leaflets.
3. Provided translation and editing of an exercise DVD that was originally developed specifically for people with movement disorders (Completed). The Arabic version of the DVD is now open to public on YouTube channel. <https://www.youtube.com/channel/UCH7_ed2__mkzXNWPZqVIosw>.
 |
| **Community services** |
| 1. Participated in free medical day that was specifically devoted to raise awareness in Jordan about role of physical therapy in improving health. Participation included providing voluntary screening for neurological patients, providing two physiotherapy awareness lectures to people with multiple sclerosis and people with Parkinson’s disease. The event was held in Amman in April 2017.
2. Participated in free medical day that included providing voluntary physiotherapy services in Beit Rass village in Irbid in May 2016.
3. Participated in a radio program to increase the awareness about role of physiotherapy in managing people with multiple sclerosis (University of Jordan FM, in March 2016).
4. Participated in free medical day that included providing voluntary health screening at Al-Mazar school in Irbid in May 2015.
 |