

Meeyoung Kim, PT, Ph.D.

EDUCATION

- Ph.D. Yongin University, Gyonggi Do, Korea** December 2013
Doctoral Program in Department of Physical Therapy in Graduate School. Laboratory of Health Science & Nanophysiotherapy.
Advisor: Junghwan Kim, PT, Ph.D
Committee: Byongyong Whang, Jangsung Park, Huijong Yoon
Thesis: **The Effect of High Frequency Repetitive Transcranial Magnetic Stimulation with Kinesiotherapy on Paretic Hand Functions after Stroke.**
- M.S. Yongin University, Gyonggi Do, Korea** December 2010
Master's Program in Department of Physical Therapy in College of Rehabilitation & Health Science.
Laboratory of Health Science & Nanophysiotherapy.
Advisor: Junghwan Kim, PT, Ph.D
Committee: Bumchul Yoon, Byongyong Whang, and Wanhee Lee
Thesis: **The Effect of Hand Activity Combined with Repetitive Transcranial Magnetic Stimulation on Paretic Hand Function in Female Patients after Stroke.**
- B.Sc. Korea University, Seoul, Korea** February, 2007
Physical Therapy, College of Health Science.
Adviser: Bumchul Yoon, PT, Ph.D.
Thesis: **The Effect of Treadmill Exercise on Spatial Memory and the Expression of the c-Fos in the Hippocampus of Streptozotocin-induced Diabetic Rats.**
- B.A. Yonsei University, Seoul, Korea** February, 2001
Psychology, College of Literature & Art

WORK EXPERIENCE (2007-present)

Physical Therapist licensed in Korea, Dubai, and Abu Dhabi

- Senior Physiotherapist** in Advanced Center for Daycare Surgery, Abu Dhabi, UAE 2015-Present
Working as Supervisor of Physiotherapy Department
Accomplishments:
- Build physiotherapy department from the ground up and designed the clinic settings
- Educated and trained physiotherapists for physiotherapy approach
- Experienced as speaker for both internal and external lectures
- Provided the physiotherapy research on UAE patients
- Medical Advisor** for TMS (Transcranial Magnetic Stimulation) Application for Neuro Rehabilitation in Technoways, Dubai, UAE 2012-Present
Accomplishment:
- Developed and distributed clinical applications for TMS
- Trained physiotherapists and physicians for TMS application

Senior Physiotherapist in Dubai Physiotherapy and Rehabilitation Center, Dubai, UAE Worked as <u>Responsible person for Adult Neuro Physiotherapy</u> and <u>Manager for Korean Physiotherapists</u>	2012-2015
Accomplishment:	
<ul style="list-style-type: none"> - Start-up member of the center and designed clinical set-ups for the launch - Educated and trained physiotherapists and physicians for rehabilitation and physiotherapy approach - Experienced as speaker for both internal and external lectures - Contributed implementing intensive rehabilitation system in DHA - Helped Communications between local and Korean staffs 	
Specialist for Transcranial Magnetic Stimulation in Outpatient Rehabilitation Center of Bobath Memorial Hospital, Gyeonggi-do, Korea	2009-2012
Accomplishment:	
<ul style="list-style-type: none"> - Developed and provided protocols for TMS therapy for neurological deficit patients 	
Physical Therapist , Department of Physical Therapy Service of Bobath Memorial Hospital, Gyeonggi-do, Korea	2007-2012
Accomplishment:	
<ul style="list-style-type: none"> - Educated and trained physiotherapists and physiotherapy students - Experienced as speaker for both internal and external lectures - Completed 1 year physiotherapist internship based on Bobath Approach - Experienced diverse conditions of neurological deficits in inpatients and outpatients 	

TEACHING EXPERIENCE (2008-present)

College Level

Lecturer	<i>An Introduction to Physical Therapy</i> Department of Physical Therapy in College of Rehabilitation & Health Science Yongin University, Korea	2011-2012
Guest speaker	<i>The Control of Locomotion and Gait Analysis</i> Workshop for Physiotherapy Students in University of Sharjah, UAE	2015

Clinical Training Education (Theory sessions with Hands-on practice)

Lecturer	Understanding of Spinal Reflex in Human Movement Physical Therapy Department in Bobath Memorial Hospital, Korea	2009-2011
Lecturer	<i>Bobath Therapy in Practice - Intensive Training Course for Neuro Physiotherapists and Psychiatrists (2 weeks training course for health professionals)</i> Physiotherapy Department in Rashid Hospital, UAE	2012
Lecturer	TMS Therapy in Practice Adam Vital Physiotherapy & Rehabilitation Center, Dubai, UAE	2018
Guest Speaker	Clinical Application of TMS Sponsored by Magventure, Kuwait	2014

Internship Education

Lecturer	<i>Role of Vestibular System in Stroke Rehabilitation</i> Physical Therapy Department in Bobath Memorial Hospital, Korea	2008
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Practical Education

Speaker of CME (Continuous Medical Education) by Health Authority of Abu Dhabi, UAE

2016 - 2018

- Understanding Human Locomotion –Postural Control for Locomotion
- Breathing Exercise and Pain Management
- Scoliosis and Posture –Physiotherapeutic Approach
- The Control of Locomotion in Bobath Concept
- TMS (Transcranial Magnetic Stimulation) in Physiotherapy Practice
- Human Locomotion (Gait Analysis and Related Pathologies)

Speaker of CME by Dubai Health Authority, UAE

2013 -2014

- Physiotherapy Combined with Transcranial Magnetic Stimulation (TMS)
- Role of Cerebellum for Motor Control

Teaching Interests

Physiotherapy practice in neurological rehabilitation (**Bobath approach**)

Transcranial magnetic stimulation (**TMS**) in rehabilitation

Human neuroscience (especially neuroplasticity after neurological impairment)

Human movement analysis

HONORS & AWARDS

Meritorious Graduate Student Award in Physical Therapy

2014

Yongin University

Doctoral Program in Department of Physical Therapy in Graduate School

Research Presentation Award for Undergraduate in Physical Therapy

2006

KAPT (Korean Association of Physical Therapists)

RESEARCH EXPERIENCE

Graduate Student Researcher

Laboratory of Health Science & Nanophysiotherapy Department of Physical Therapy, Yongin University

2011-2014

Advisor: Junghwan Kim, PT, Ph.D.

Undergraduate Researcher

2004-2007

Department of Physical Therapy, Korea University

Advisor: Bumchul Yoon, PT, Ph.D.

Research Interests

Neuro Rehabilitation, Neuroplasticity, Transcranial magnetic stimulation

MEMBERSHIPS

Korean Bobath Association

2007-present

Korean Association of Physical Therapists

2007-present

Korean Society of Environmental Risk Assessment and Health Science

2009-present

CERTIFICATES

Bobath advanced course – Assessment and treatment of adult with neurological conditions (No. 2018156)

Issued by IBITA, 2018

Yoga alliance registered yoga teacher training course (No. GTG-1035 F)

Issued by Yoga Alliance, 2018

Dry needling course 1(No. 0269/17)

Issued by ODNS, 2017

Dynamic neuromuscular stabilization - Kolar A developmental kinesiology approach (No. 12PS0/CATTA 2489)

Issued by Rehabilitation Prague school, 2012

Bobath basic course – Assessment and treatment of adult with neurological conditions (No. 2009192)

Issued by IBITA, 2009

Orthopedic manual therapy introductory course (No. 08PI-7573)

Issued by KAOMT, 2008

Sports taping (No. ST-303)

Issued by Korean society of sports physical therapy, 2006

Sports massage (No. SM-389)

Issued by Korean society of sports physical therapy, 2006

Certificate of Social welfare volunteering Activity (Physiotherapist assistant) for 328 hours (No. 2006-0215)

Issued by Seoul Holy Family Hospital, 2006

PUBLICATIONS

(Total 46 articles)

Representative Publication

1. **Effects of high frequency repetitive transcranial magnetic stimulation with physical healthy exercise in stroke.** *Toxicology and Environmental Health Science*, 7(2): 160-170, 2015

2. **The effect of low frequency repetitive transcranial magnetic stimulation combined with range of motion exercise on paretic hand function in female patients after stroke.** *Neuroscience & Medicine* 4:77-83, 2013

Year 2018

3. Analysis of Interferential Current Therapy-Induced Skin Changes in Healthy Korean Men. *Natural Science*, 11:436-447, 2018.

4. Analysis of skin parameters of Korean men according to the parts of the body for integumentary physiotherapy research. *Health*, 10:467-486, 2018

5. Characteristic Dermatologic Changes in the Condition of Skin after Ultrasonic Stimulation in Healthy Korean Men. *Journal of Cosmetics, Dermatological Sciences and Applications*, 8:195-206, 2018.

PUBLICATIONS (*continued*)

6. Somatotype analysis of Korean combat sport athletes based on weight divisions. *Archives of Budo*, 14:169-178, 2018

Year 2017

7. Respiratory function of the Korean elite judo athletes and non-athletes. *Archives of Budo*, 13:297-305, 2017.

8. A review of Cardiovascular Disease n Korean Shift Workers and the Approach to Improve Their Health at Y Power Plant. *Transylvanian Review*, Vol XXV, 17:4357-4363, 2017.

Year 2016

9. A comparative study of the effects of trunk exercise program in aquatic and land-based therapy on gait in hemiplegic stroke patients. *Journal of Physical Therapy Science*, 28:1904-8, 2016

10. Analysis of the respirogram phase of Korean wrestling athletes compared with nonathletes for sports physiotherapy research. *Journal of Physical Therapy Science*, 28:392-398, 2016

11. Differences in the body pressure-related sensory changes between the floor and mattress in a static supine position for physiotherapy research: a randomized controlled pilot trial. *Journal of Physical Therapy Science*, 28:1086-91, 2016

Year 2015

12. Analysis of combat sports players' injuries according to playing style for sports physiotherapy research. *Journal of Physical Therapy Science*, 27:2425-2430, 2015

13. Analysis of isokinetic muscle strength for sports physiotherapy research in Korean ssireum athletes. *Journal of Physical Therapy Science* 27:3223-3226, 2015

14. A review of deoxycorticosterone acetate-salt hypertension and its relevance ofr cardiovascular physiotherapy research. *Journal of Physical Therapy Science* 27:303-307, 2015

15. Differences in two-point discrimination and sensory threshold in the blind between braille and text reading: a pilot study. *Journal of Physical Therapy Science* 27:1919-1922, 2015

16. DJ-1 protects against undernutrition-induced atrophy through inhibition of the MAPK-ubiquitin ligase pathway in myoblasts. *Life Sciences* 143:50-57, 2015

17. The effects of aquatic trunk exercise on gait and muscle activity in stroke patients: a randomized controlled pilot study. *Journal of Physical Therapy Science* 27:3549-3553, 2015

18. Effects of conventional overground gait training and a gait trainer with partial body weight support on spatiotemporal gait parameters of patients after stroke. *Journal of Physical Therapy Science* 27:1603-1607, 2015

19. Effect of a muscle strengthening exercise program for pelvic control on gait function of stroke patients. *Journal of Physical Therapy Science* 27:641-644, 2015

20. Somatotype and body composition analysis of Korean youth soccer players according to playing position for sports physiotherapy research. *Journal of Physical Therapy Science* 27:1013-1017, 2015

21. The effect of a progressive resistance training program on walking ability in patients after stroke: a pilot study. *Journal of Physical Therapy Science*, 27: 2837-2840, 2015

PUBLICATIONS (*continued*)

Year 2014

22. A pilot study on pain and the upregulation of myoglobin through low-frequency and high-amplitude electrical stimulation-induced muscle contraction. *Journal of Physical Therapy Science* 26:985-988, 2014
23. A review of signal transduction of endothelin-1 and mitogen-activated protein kinase-related pain for nanophysiotherapy. *Journal of Physical Therapy Science* 26:789-792, 2014
24. Cofilin Phosphorylation Decreased by Serum-free Starvation with Low Glucose in the L6 Myoblasts. *Journal of Physical Therapy Science* 26:1543-1545, 2014
25. Comparison of static plantar foot pressure between healthy subjects and patients with adolescent idiopathic scoliosis. *Toxicology and Environmental Health Sciences* 6:127-132, 2014
26. Decrease of both cofilin and LIM Kinase phosphorylation in the skeletal muscles of immobilization-induced atrophy rats. *Journal of Physical Therapy Science* 26:355-357, 2014
27. Decrease of PKB/Akt phosphorylation is partially mediated by SAPK/JNK activation in serum-free L6 myoblasts starved with low glucose. *Journal of Physical Therapy Science* 26:1757-1760, 2014
28. Phosphorylation of heat shock protein 27 is increased by cast immobilization and by serum-free starvation in skeletal muscles. *Journal of Physical Therapy Science* 26:1975-1977, 2014
29. Somatotype Analysis of Elite Boxing Athletes Compared with Nonathletes for Sports Physiotherapy. *Journal of Physical Therapy Science* 26:1231-1235, 2014
30. Waveform analysis of the brachial-ankle pulse wave velocity in hemiplegic stroke patients and healthy volunteers: A pilot study. *Journal of Physical Therapy Science* 26:501-504, 2014

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Year 2013

31. A pilot study on the effect of functional electrical stimulation of stroke patients in a sitting position on balance and activities of daily living. *Journal of Physical Therapy Science* 25:1617-1620, 2013
32. A review of signal transduction in mechanisms of smooth muscle contraction and its relevance for specialized physical therapy. *Journal of Physical Therapy Science* 25:129-141, 2013
33. Differences in body components and electrical characteristics between youth soccer players and non-athletes. *Health* 5:1010-1015, 2013
34. Differences in leg length discrepancy and weight distribution between the healthy and unhealthy sides of hemiplegic stroke patients. *Toxicology and Environmental Health Sciences* 5:221-226, 2013
35. Differences in rheobase and chronaxie between the paretic and non-paretic sides of hemiplegic stroke patients: a pilot study. *Journal of Physical Therapy Science* 25:717-719, 2013
36. Increase of myoglobin in rat gastrocnemius muscles with immobilization-induced atrophy. *Journal of Physical Therapy Science* 25:1617-1620, 2013
37. Posture analysis of various types of crutch gait of healthy volunteers. *Journal of Physical Therapy Science* 25:453-458, 2013

Year 2012

38. A study on relationship between the participation in senior welfare programs and the recognition of health condition. *Toxicology and Environmental Health Science* 4:92-99, 2012

PUBLICATIONS (*continued*)

39. Change of muscular activity and dynamic stability of the knee joint due to excessive and repetitive jumping or cutting by female athletes. *Journal of Physical Therapy Science* 24:715-719, 2012
40. Noxiousness of hypertension-related norepinephrine and upregulation of norepinephrine induced by high intensity electrical stimulation in healthy volunteers. *Journal of Physical Therapy Science* 24:795-800, 2012
41. Temporal changes in skin temperature caused by wet and dry heat in healthy volunteers. *Journal of Physical Therapy Science* 24:1209-1213, 2012
42. The effect of an early lumbar exercise program on trunk strength and the Oswestry disability index after herniated nucleus pulposus surgery. *Journal of Physical Therapy Science* 24:165-168, 2012
43. The effects of functional electrical stimulation on balance of stroke patients in the standing posture. *Journal of Physical Therapy Science* 24:77-81, 2012
44. The effect of standing posture-enhancing exercise on Parkinson's disease patients' turning around motion. *Journal of Physical Therapy Science* 24:1047-1050, 2012

Year 2011

45. Analysis of plantar foot pressure during the non-crutch, two-point, and four-point crutch gait performed by healthy volunteers. *Journal of Physical Therapy Science* 23:489-493, 2011
46. Comparison study on the daily performance capability and body fat percentage for a healthy life among elderly people using a senior welfare center. *Journal of Toxicology and Environmental Health Sciences* 3:120- 128, 2011

CONFERENCE PRESENTATIONS

Year 2018

Poster Presentation at 14th ICT (International Conference on Toxicogenomics)

1. The Effect of Ultrasonic Stimulation in the Condition of Normal Skin for Molecular Nanophysiotherapy research
2. The Effect of Slow Eccentric Approach on Total Knee Replacement Patients for Molecular Nanophysiotherapy Research
3. The Effect of Interferential Current Stimulation in the Condition of Normal Skin for Molecular Nanophysiotherapy Research
4. Somatotype Analysis of the Stroke between the Independent and Assistive Gait Groups for Molecular Nanophysiotherapy Research
5. The Effects of Treadmill with Partial Weight Support in Hemiplegic Stroke for Molecular Nanophysiotherapy Research

Poster Presentation at 11th ICoEHS (International conference on Environmental Health Science)

1. Weight Bearing Approach with Partial Body Support for Healthy Gait in Stroke
2. Differences in Somatotype Analysis between the Paretic and Nonparetic Sides of Hemiplegic Stroke
3. Characteristic Dermatologic Changes in the Condition of Skin after Interferential Current in Healthy Men
4. Effect of Orthopedic Therapy on Patients with Total Knee Replacement for Health Science Research
5. Characteristic Dermatologic Changes in the Condition of Skin after Ultrasonic Stimulation in Healthy Korean Men
6. A Comparative Study of Physical Health among Office and Technical Workers in Y Plant

Poster Presentation at 26th Federation Meeting of Korean Basic Medical Scientists

1. Somatotype Analysis of Korean Combat Sport Athletes Based on Weight Divisions
2. Somatotype Analysis of Both Sides Body in Stroke Patients

3. Analysis of the Pressure-related Sensory Changes in Supine Position with Pillow
4. Effect of Orthopaedic Manual Physical Therapy on Patients with Total Knee Replacement in Early Stage

Year 2017

Poster Presentation at 2nd International Conference on Educational Neuroscience

1. Influence of Neuro-developmental Therapy with Repetitive Magnetic Stimulation on Gait Functions in Female Adults with Multiple Sclerosis

Poster Presentation at 13th ICT (International Conference on Toxicogenomics)

1. The Effect of Health Management in Y Power Plant
2. Analysis of Dermatologic Characteristic of Healthy Korean Men According to the Parts of the Body
3. Differences in the Body Pressure-related Sensory Changes between the Male and Female in Side-lying Position for Health Science Research
4. Analysis of the Respirogram Phase between the Korean Elite Judo Athletes and Non-athletes
5. The Correlation between Activities of Daily Living and Body Composition in Stroke Patients

Poster Presentation at 10th ICoEHS (International conference on Environmental Health Science)

1. Differences in Pressure Sensory between the Male and Female in Side-lying Position
2. Analysis of Skin Characteristics of Healthy Volunteers according to the Part of the Body
3. Somatotype Analysis of Paretic side Compared with Non-paretic Side in Hemiplegic Stroke Patients
4. Analysis of the Physical Characteristics of Elite Athletes according to the Weight Division
5. Analysis of the Body Composition and Basic Activities of Daily Living in Patients after Stroke