

Shih-fen Hsiao, PT, PhD

Educational Background

- First Degree: BSc (Hons) in Physical Therapy, Kaohsiung Medical College (KMC) (1988-1992)
- Higher Degree: PhD in Physiotherapy, King's College London (KCL), UK (1994-1998)

Specialty

- Neurological Physical Therapy
- Geriatric Physical Therapy
- Continuous Care and Multidisciplinary Approach
- Strength Investigation
- Motor Control and Motor Learning

Courses

- Undergraduates
Movement Sciences
Neurological Physical Therapy
Geriatric Physical Therapy
Motor Control and Motor Learning
Clinical Study in Movement Disorder
- Postgraduates
Interdisciplinary Collaboration in Holistic Healthcare
Movement Disorders and Management

Research Projects

- as Principle Investigators
1998-1999 *The effect of muscle length on maximal isometric*



- 1999-2001 *voluntary contraction and activation of quadriceps in human* , (CMC87-PT-07). Funded by China Medical College, Taiwan.
- 1999-2001 *Muscle strength and strengthening after stroke - its relevance with function and other factors* (NSC89-2320-B-037-044 & NSC89-2314-B-037-161). Funded by National Science Council (NSC), Taiwan
- 2002-2004 *Biomechanics and neuromuscular adaptation in ACL patients – Component Project 3: Neuromuscular Adaptation of Knee Muscles in Patients with ACL Deficiency* (NHRI-EX91-9126EP, NHRI-EX92-9126EP & NHRI-EX93-9126EP). Funded by National Health Research Institute, Taiwan.
- 2003-2005 *Diastasis rectus abdominis: its influence on rectus abdominis function and the effects of therapeutic exercises.* (NSC-92-2314-B-037-022 & NSC-92-2314-B-037-012). Funded by NSC, Taiwan.
- 2005-2006 *Long-term Adaptation of Knee Muscles and Reflexes in ACL deficiency* (NSC94-2314-B-037-018). Funded by NSC, Taiwan.
- 2009-2010 *Project 6 of Axis Ability 1: Promoting Information Literacy for Learning. Program for Learning and Teaching Excellence Year 98-99.* Funded by Ministry of Education (MoE), Taiwan.
- 2011-2012 *Project 4 of Axis 2: Promoting Language Proficiency and Information Literacy for Learning. Program for Learning and Teaching Excellence Year 100.* Funded by MoE, Taiwan.
- 2011-2012 *Project 1 of Axis 3: Pedagogical Content Knowledge. Program for Learning and Teaching Excellence Year 100-101.* Funded by MoE, Taiwan.
- 2011-2012 *Axis 4: Constructing an Unlimited Learning Environment. Program for Learning and Teaching Excellence Year 100-101.* (As Vice Convener) Funded by MoE, Taiwan.
- 2011-2012 *Project 3 of Axis 3: Constructing A Long-Term Care Master Program for Elderly. Supplementary Program for Learning and Teaching Excellence Year 100.* (As Vice Convener) Funded by MoE, Taiwan.
- 2013-2014 *Project 2 of Axis 4: Project for Campus Internationalization. Program for Learning and Teaching Excellence Year 102-103.* Funded by MoE, Taiwan.

- Research Projects as Co-Investigators



2002-2003	<i>A Survey of Physically Disabled Preschoolers, Primary School Students, and Their Teachers on the Utilization of Professional Services in Kaohsiung.</i> Funded by Educational Bureau, Kaohsiung City Government, Taiwan.
2004-2005	<i>EMG Analysis of Abdominal Muscles during Exercises.</i> Funded by KMU, Taiwan.
2005-2008	<i>The relationship between postural control and reaching tasks in children: Development of research tool and preliminary, exploratory investigation</i> (NSC94-2314-B-037-019; NSC95-2314-B-037-069). Funded by NSC, Taiwan.
2013-2014	<i>The comparisons of effects of core stability exercise and Tai Chi on core muscle performances, core stability and balance in community-living elderly</i> (MoST 102-2314-B-037-018-). Funded by Ministry of Sciences and Technologies, Taiwan.

Career Experiences

- Academic and Clinical Profiles

1992-1994	Teaching Assistant, School of Rehabilitation Medicine, KMC
1992-1994	Junior rotational physical therapist, Department of Rehabilitation Medicine, Chuan-Ho Memorial Hospital, KMC
1995-1997	Two years winner of the Overseas Research Student's (ORS) Award, awarded by CVCP (<i>Committee of Vice-Chancellors and Principals of UK Universities</i>), UK
1997-1998	Lecturer, Physiotherapy Group, KCL, UK
1998-1999	Assistant Professor, School of Physical Therapy, China Medical College, Taiwan
1999-present	Assistant Professor, Department of Physical Therapy, College of Health Sciences, KMU
1999-2012, 2013-2014, 2015-present	Senior Neurological Physical Therapist, Department of Rehabilitation Medicine, Chuan-Ho Memorial Hospital, KMU
2005-2006	Chief, Division of Academic Affairs, College of Health Sciences, KMU
2006-2007	Chief, Division of Administration Consultation, Center of Computer, KMU
2007-2012	Chief, Division of IT Application and Promotion, Office



	of Information Technology, KMU
2012-2013	Visiting Scholar, College of Health Sciences, Hokkaido University, Japan
2013-present	Assistant Professor, Master Degree Program in Aging and Long-Term Care, College of Nursing, KMU
2013-2015	Administrative Coordinator, Department of Physical Therapy, College of Health Sciences, KMU
2013-2015	Chief, Division of General Affairs, College of Health Sciences, KMU

● Professional Affiliation and Activity

1995-present	State Registered Physiotherapist, The Council for Professions Supplementary to Medicine, UK
1996-present	MCSP, The Chartered Society of Physiotherapy, UK
1996-present	Licensed Physical Therapist, Department of Health, Taiwan
1997-present	Member, Society for Research in Rehabilitation
1999-present	Member, Taiwan Physical Therapy Association (TPTA)
1999-present	Superintendent Physical Therapist, credentials granted by the TPTA
1999-present	Member, Society of Kaohsiung Physical Therapists (SKPT)
1999-2001	Member, Committee of International Affairs, TPTA
2001-2011, 2014-	Director, Board of Directors, TPTA
2001-present	Chair, Committee of International Affairs, TPTA
2001-present	Primary Contact of the WCPT, TPTA
2001-2004	Director, Board of Directors, the SKPT
2001-2004	Chair, Educational Committee, the SKPT
2002-2005	Voting delegate, National Federation of Associations of Physical Therapists Taiwan
2003-present	Proposition Member, Ministry of Examination, Examination Yuan, Taiwan
2005-2007	Treasury, Executive Committee of Asia Western Pacific Region, WCPT
2005-2008	Member, Committee for Media & Publications, TPTA
2005-present	Member, Committee for Continuous Care Promotion, TPTA
2011-2014	Executive Director, TPTA
2011-2015	Director, Board of Directors, International Society for Electrophysical Agents in Physical Therapy (ISEAPT)
2011-present	Auditor, PT undergraduate and postgraduate training



programs of teaching hospitals, Task Force on Accreditation of Teaching Hospitals, Taiwan Joint Commission on Hospital Accreditation (TJCHA)

2015- present

Secretary General, ISEAPT

Publications

● *A. Journal articles*

1. **Hsiao S.-F.** & Hsu H.-C. (1999) The effect of muscle length on maximal voluntary contraction and activation of quadriceps in human. *The Journal of Health Science* **1**(2):131-145.
2. Lin J.-H., **Hsiao S.-F.**, Chang C.-M., Huang M.-H., Liu C.-K. & Lin Y.-Y. (2000) Factors influencing functional independence outcome in stroke patients after rehabilitation. *Kaohsiung Journal of Medical Sciences* **16**(7):351-359.
3. Newham D.J. & **Hsiao S.-F.** (2001) Knee muscle isometric strength, voluntary activation and antagonist co-contraction in the first six months after stroke. *Disability and Rehabilitation* **23**(9):379-386. (SCI)
4. Lin J.-H., **Hsiao S.-F.**, Liu C.-K. & Lin Y.-T. (2001) Rehabilitation fees, length of stay and efficiency for hospitalised stroke patients: a preliminary study based on function-related groups. *Kaohsiung Journal of Medical Sciences* **17**(9):475-483.
5. Lin J.-H., Hsieh C.-L., **Hsiao S.-F.** & Huang M.-H. (2001) Predicting long-term care institution utilization among post-rehabilitation stroke patients in Taiwan: a medical centre-based study. *Disability and Rehabilitation* **23**(16):722-730. (SCI)
6. Lin J.-H., Lin R.-T., Hsieh C.-L., **Hsiao S.-F.** & Liu C.-K.. (2003) Prediction of poststroke dementia.. *Neurology* **61**(1):343-348.. (SCI) (NSC87-2314-B-037-010, DOH-84-TD-022, NHRI-GT-EX89S506L)
7. Lin J.-H., Hsieh C.-L., Lo S.-K., **Hsiao S.-F.** & Huang M.-H.. (2003) Prediction of functional outcomes in stroke inpatients receiving rehabilitation. *Journal of Formosan Medical Association* **102**(10):695-700. (SCI) (NSC89-2320-B-037-014)
8. Chen S.-M., Hwang I.-S., Chen C.-H., **Hsiao S.-F.**, Lin J.-H.. (2005) Effect of Treadmill Walking on the Lower Extremity Certainty in Gait Performance of Stroke Patients. *Formosan Journal of Physical Therapy* **30**:116-123.

9. Liaw L.-J., Liu S.-M. and **Hsiao S.-F.** (2006) The Reliability of Measurement of Inter-recti Distance Using Real-time Ultrasonography. *Formosan Journal of Physical Therapy* **31**:213-218.
10. Lue Y.-J., Hsieh C.-L., Liu M.-F., **Hsiao S.-F.**, Chen S.-M., Lin J.-H. and Lu Y.-M.. (2009) Influence of Testing Position on The Reliability of Hip Extensor Strength Measured by A Handheld Dynamometer. *Kaohsiung Journal of Medical Sciences* **25**:126-32. (SCI)
11. Liao H.-F., Wang C.-H., Hwang J.-M., Lin C.-F., Chien W.-J. Lin Y.-H., **Hsiao S.-F.**, Cheng Y.-C., Sun S.-H., Wang P.-J., Lin K.-Y., Task Force Group on Physical Therapy Manpower in Taiwan's Hospitals. (2011) Proposals for Physical Therapy Manpower in Taiwan's Hospital System. *Formosan Journal of Physical Therapy* **36** (2):112-122.
12. Lu Y.-M., Lin J.-H., **Hsiao S.-F.**, Liu M.-F., Chen S.-M. and Lue Y.-J.. (2011) The Relative and Absolute Reliability of Leg Muscle Strength Testing by a Handheld Dynamometer. *Journal of Strength and Conditioning Research* **25**(4):1065-71. (SCI)
13. Wang H.-Y., Chen C.-C., and **Hsiao S.-F.** (2012) Relationships between respiratory muscle strength and daily living function in children with cerebral palsy. *Research in Developmental Disabilities* **33**:1176-1182. (SCI)
14. **Hsiao S.-F.**, Chou P.-H., Hsu H.-C., Lue Y.-J. (2014) Changes of Muscle Mechanics Associated with Anterior Cruciate Ligament Deficiency and Reconstruction. *Journal of Strength and Conditioning Research* **28**(2):390–400. (SCI)
15. Mani H., **Hsiao S.-F.**, Takeda K., Hasegawa N., Mitsuhisa T., Tsuda A., Oohashi T., Suwahara T., Ito K., Asaka T. (2015) Age-related changes in distance from center of mass to center of pressure during one-leg standing. *Journal of Motor Behavior* **47**(4):282–290. (SCI)
16. Tsuda A., Mochiduki T., Konishi T., Izumi T., Mani H., Yamamoto K., **Hsiao S.-F.** Asaka T. (2015) Characteristics of Stability Limits and Foot Pressure Distributions during Reaching Movements by Stroke Patients. *Physical Therapy Sciences* **30**(4):635–640.

- B. Books

1. **Hsiao S.-F.** (1998) Neuromuscular and Functional Performance in Stroke



Patients; the Effect of Physiotherapy Intervention[PhD Thesis]. University of London, London.

2. **Hsiao S.-F.** & Newham D.J. (2001) Bilateral deficits of voluntary thigh muscle contraction after recent stroke. In Gantchev N. ed: *From Basic Motor Control to Functional Recovery II*. Sofia: Academic Publishing House (Bulgaria Academy of Science), 377-384. (ISBN: 954-430-813-X)

3. **Hsiao S.-F.**, Chou P.-H., Tsai I.-C. & Li J.-S. (2004) Weakness and voluntary activation failure of knee muscles in patients with ACL deficiency and reconstruction. In Roy S.H. ed: *XVth Congress of the International Society of Electrophysiology and Kinesiology*. Bologna: Medimond International Proceedings, 111-116. (ISBN: 978-88-7587-055-3)

4. **Hsiao S.-F.** Neurological Physical Therapy Techniques: Bobath Concept and Techniques. (2010) in Lin K.-H. ed: *Neurological Physical Therapy (Vol 1)*. Taipei: Fartherng Publication, 6-2~6-16. (ISBN: 978-986-6287-06-0)

5. Lue Y.-I. & **Hsiao S.-F.** (2011) Consideration for Muscle Strength Measurement. In Buchanan J.S. ed: *Nutritional and Physical Education*. New York: Nova Sciences Publishers. (ISBN: 978-1-61209-583-7)

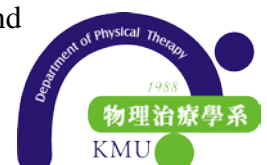
● C. Conference papers

1. **Hsiao S.-F.** & Newham D.J. (1998) The non-paretic side of stroke patients: the extent of deficit in mechanical output *Conference of British Society of Rehabilitation Medicine & Society for Research in Rehabilitation*, 15-17 July, Southampton, UK. (Abstract in *Clinical Rehabilitation* **13** (1): 80-81, 1999)

2. Newham D.J. & **Hsiao S.-F.** (1998) Voluntary activation of quadriceps after stroke: the first six months. *Conference of British Society of Rehabilitation Medicine & Society for Research in Rehabilitation*, 15-17 July, Southampton, UK. (Abstract in *Clinical Rehabilitation* **13** (1): 92, 1999)

3. **Hsiao S.-F.** & Newham D.J. (1998) Relationship between neurophysiological and function recovery after stroke. *Conference of Human Motor Performance; The Interaction between Science and Therapy*, 21-23 July, London, UK.

4. Newham D.J. & **Hsiao S.-F.** (1998) Changes in mechanical output and voluntary activation of knee muscles in stroke patients: muscle weakness



without excessive antagonist restraint. *Conference of Human Motor Performance; The Interaction between Science and Therapy*, 21-23 July, London, UK.

5. **Hsiao S.-F.** & Newham D.J. (1999) Reduced mechanical output and voluntary activation of knee muscles in stroke patients: a six-month follow-up. *WCPT Congress 1999: Bridging the Culture*, 23-28 May, Yokohama, Japan.

6. **Hsiao S.-F.** & Newham D.J. (2000) Correlation between neurophysiological and functional recovery in the first six months after stroke. *The Second Pan-Pacific Conference on Rehabilitation: Neurological Rehabilitation*, 25-27 August, Hong Kong.

7. **Hsiao S.-F.** & Newham D.J. (2000) Changes in knee muscles performance in stroke patients: weakness and activation failure without excessive antagonist co-activation. *The Second Pan-Pacific Conference on Rehabilitation: Neurological Rehabilitation*, 25-27 August, Hong Kong.

8. **Hsiao S.-F.** & Newham D.J. (2000) Mechanical deficits of the ipsilateral side on recent stroke patients. *The Seventh Asian Confederation for Physical Therapy Congress*, 8-10 September, Manila, Philippines.

9. **Hsiao S.-F.** & Newham D.J. (2000) The myths of the ipsilateral side on recent stroke patients. *The Forty-Second Annual Congress of The Physical Therapy Association of Republic of China*, 30 September-1 October, Taipei, Taiwan.

10. **Hsiao S.-F.** & Newham D.J. (2001) Bilateral deficits of voluntary thigh muscle contraction after recent stroke. *The Second International Conference of Motor Control*, 9-14 September, Varna, Bulgaria.

11. **Hsiao S.-F.** (2001) Exercise guidelines for Sweetie. *Conference of Live Your Life to The Fullest with Diabetes; An Interdisciplinary Approach*. Kaohsiung Society of Physical Therapists. 18 November, Kaohsiung, Taiwan.

12. **Hsiao S.-F.** (2002) Special handling techniques for critical HI. *Conference of Updates for Managing Head Injured Patients*. Kaohsiung Society of Physical Therapists. 3 March, Kaohsiung, Taiwan.

13. **Hsiao S.-F.**, Huang T.-H., Tsai I.-C. & Liaw L.-J. (2002) A low-cost lower extremity holder: the idea, the making and the preliminary clinical results. *The Forty-fourth Annual Congress of The Physical Therapy Association of Republic of China*, 14-15 September, Taipei, Taiwan.

14. **Hsiao S.-F.** & Hsu H.-C. (2002) The effect of muscle length on voluntary activation of quadriceps in human. *The Eighth General Assembly of Asian Confederation for Physical Therapy*, 17-20 November, Bangkok, Thailand.
15. **Hsiao S.-F.** & Tsai I.-C. (2003) Voluntary activation failure of knee muscles in patients with ACL deficiency and reconstruction. *The International Society for Posture and Gait Research Meeting*, 23-27 March, Sydney, Australia.
16. **Hsiao S.-F.**, Huang T.-H. & Tsai I.-C. (2003) Introducing a hand-made, low-cost lower limb positioner. *WCPT 14th International Congress*, 7-12 June, Barcelona, Spain.
17. **Hsiao S.-F.**, Chou P.-H., Tsai I.-C. & Li J.-S. (2004) Weakness and voluntary activation failure of knee muscles in patients with ACL deficiency and reconstruction. *XVth Congress of the International Society of Electrophysiology and Kinesiology*, 18-21 June, Boston, USA.
18. **Hsiao S.-F.**, Chou P.-H., Tsai I.-C. & Li J.-S. (2004) Strength changes in ACL deficient knees before and after reconstruction. *The Forty-ninth Annual Congress of The Physical Therapy Association of Republic of China*, 18-19 September, Taipei, Taiwan.
19. Liu S.-M., Liaw L.-J. & **Hsiao S.-F.** (2004) Changes in the rectus abdominis performance at various trunk angles. *The Forty-ninth Annual Congress of The Physical Therapy Association of Republic of China*, 18-19 September, Taipei, Taiwan.
20. Liaw L.-J., Liu S.-M. & **Hsiao S.-F.** (2004) Quantification of inter-recti distance with real-time ultrasonography in human. *The Forty-ninth Annual Congress of The Physical Therapy Association of Republic of China*, 18-19 September, Taipei, Taiwan.
21. Hsiao S.-H., Chou P.-H. & Li J.-S. (2005) Changes in quadriceps voluntary activation and stretch reflex. *The XVII conference of International Society for Posture and Gait Research*. 29 May -2 June Marseille, France.
22. Liu S.-M., Liaw L.-J. & **Hsiao S.-F.** (2005) Quantification of Rectus Abdominis Diastasis with Ultrasonography in Postpartum Women. *The Fiftieth Scientific Conference of The Physical Therapy Association of Republic of China*, 25 September, Taipei, Taiwan.

23. **Hsiao S.-F.**, Liu S.-M. & Liaw L.-J. (2005) Quantification Of Rectus Abdominis Diastasis With Ultrasonography in Post-Partum Women. *The combined 4th WCPT-AWP Congress & the 9th ACPT Congress*, 30 October - 1 November, Seoul, Korea.
24. Liaw L.-J., Tsai I-M, Liu S.-M. Liu & **Hsiao S.-F.** (2006) Diastasis rectus abdominis in women with full-term birth experience: the effects of therapeutic exercises. *2006 Scientific Conference of the Taiwan association of Obstetrics and Gynecology*. 25-26 March, Tainan, Taiwan.
25. Liaw L.-J., Liu M.-F., Hsu A.-T., Liu S.-M. & **Hsiao S.-F.** (2007) Electromyographic Analysis During Curl-up and Measuring muscle strength, endurance of abdominal muscles in women with full-term birth experience. *International Society Biomechanics XXI Congress*, 1-5 July, Taipei, Taiwan.
26. Liaw LJ, Liu SM, Hsu AT, **Hsiao S.-F.** (2007) Diastasis rectus abdominis in women with full-term birth experience: the effects of therapeutic exercises. *XVth World Confederation of Physical Therapy Congress*, 2-6 June, Vancouver, Canada.
27. **Hsiao S.-F.**, Chuang Y.-F., Chou P.-H., Huang M.-H. (2008) HQ Ratio after ACL Reconstruction. *10th International Congress of the Asian Confederation for Physical Therapy (ACPT)*, 29 August – 1 September, Chiba, Japan.
28. **Hsiao S.-F.**, Yang S.-H., Chen K.-H., Wu T.-Y., Lin C.-L. Lin J.-H. (2010) Effect of Home Physical Therapy: a Preliminary Report Based on Community Services in Kaohsiung. *2012 International Conference on Evidence-Based Research and Practice in Older Adults*. 26-27 May, Kaohsiung, Taiwan.
29. Tsuda A., Mochiduki T., Konishi T., Izumi T., Mani H, Hasegawa N., Totsuka M., Zhao J., Yamamoto K., **Hsiao S.-F.**, Asaka T. (2013) Characteristics of stability limits and pressure distributions during reaching movements in patients with stroke. *The combined Congress of the 6th Asia-Western Pacific Regional Congress of the World Confederation for Physical Therapy and the 12th International Congress of Asian Confederation for Physical Therapy*. 5-9 September, Taichung, Taiwan.
30. Mani H., Konishi M., Tsuda A., Izumi T., Hasegawa N., Totsuka M., Zhao J., **Hsiao S.-F.**, Asaka T. (2013) Adaptation of postural strategy with a mobile base of support. *The combined Congress of the 6th Asia-Western Pacific Regional Congress of the World Confederation for Physical Therapy and the 12th International Congress of Asian Confederation for Physical Therapy*. 5-9 September,

Taichung, Taiwan.

31. Mani H., **Hsiao S.-F.**, Hasegawa N., Totsuka M., Tsuda A., Takeda K., Oohashi T., Suwahara T., Ito K., Zhao J., Asaka T. (2013) The influence of ageing on the repeatability of single-leg standing performance. *12th Conference of the Japanese Society of Health and Behavior Sciences*. 28-29 September, Sapporo, Japan.

32. Hasegawa N., Mani H., **Hsiao S.-F.**, Totsuka M., Tsuda A., Oohashi T., Ito K., Suwahara T., Takeda K., Chao J., Asaka T. (2013) Change of feedback type affects motor learning of dynamic balance. *12th Conference of the Japanese Society of Health and Behavior Sciences*. 28-29 September, Sapporo, Japan.

33. Mani H., **Hsiao S.-F.**, Hasegawa N., Takeda K., Asaka T. (2014) Age-related changes in the relative distances from center of pressure to center of mass during one-leg standing. *The 67th Scientific Conference of The Taiwan Physical Therapy Association*. 29 March, Taipei, Taiwan.

34. Hasegawa N., **Hsiao S.-F.**, Mani H., Takeda K., Asaka T. (2014) Leaning effects of dynamic postural balance by visual or auditory feedback exercise. *The 67th Scientific Conference of The Taiwan Physical Therapy Association*. 29 March, Taipei, Taiwan.