

NUANLAOR THAWINCHAI, PhD., P.T. Associate Professor



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Education/Degree

- 2005: Doctor of Philosophy (Physical Therapy-Pediatrics), Drexel University, Philadelphia, PA, USA
- 2000: Master of Science (Physical Therapy-Pediatrics), MCP Hahnemann University, Philadelphia, PA, USA
- 1992: Bachelor of Science (Physical Therapy), Chiang Mai University, THAILAND

Positions and appointments

- 2023-present: Head of Physical Therapy Undergraduate Program (BSc in Physical Therapy Program), Faculty of Associated Medical Sciences, Chiang Mai University, Chiang Mai, THAILAND
- 2011-present: Curriculum committee of Physical Therapy Undergraduate Program (BSc in Physical Therapy Program), Faculty of Associated Medical Sciences, Chiang Mai University, Chiang Mai, THAILAND
- 2016-November 2023: Associate Head of Department for Information Technology, Department of Physical Therapy Faculty of Associated Medical Sciences, Chiang Mai University, Chiang Mai, THAILAND
- 2015-2018: Head of Pediatric Physical Therapy Division, Department of Physical Therapy, Faculty of Associated Medical Sciences, Chiang Mai University, Chiang Mai, THAILAND
- 2012-2015: Deputy Head of Department of Physical Therapy, Faculty of Associated Medical Sciences, Chiang Mai University, Chiang Mai, THAILAND
- 1997-present: Instructor at the Department of Physical Therapy, Faculty of Associated Medical Sciences, Chiang Mai University, Chiang Mai, THAILAND
- 2000-2005: Graduate research Fellow at the motion analysis lab, Philadelphia Shriners Hospital for children, Pennsylvania, USA
- 1993 – 1997: Pediatric Physical Therapist, Growth and Development Unit, Department of Pediatrics, Chulalongkorn Hospital, Bangkok, THAILAND
- 1992: Physical Therapist, Department of Rehabilitation Medicine, Lumpang Hospital, Lumpang, THAILAND

Honors and Grants

- 2021: Award for outstanding research achievement in the field of expertise for Physical Therapy, Faculty of Associated Medical Sciences, Chiang Mai University, Chiang Mai, Thailand.
- 1997-2005: Royal Thai Government Scholarship
- April 17, 2002: Dean's Award for outstanding student research, College of Nursing and Health Professional, MCP Hahnemann University, Philadelphia, PA, USA.
- 1999: Thesis Grant, Section on Pediatrics, American Physical Therapy Association, USA.
- 1999: Award for outstanding accomplishments in 12th annual research and scholarship conference, School of Health Professions, Allegheny University of the Health Sciences, Philadelphia, PA, USA.

Areas of Special Interest

- Scoliosis
- Posture and Gait analysis
- Movement and exercise sciences
- Pediatric physical therapy including high risk infants, early intervention, and school system

Membership

- PT License number 824
- The Physical Therapy Association of Thailand

Research

International Publications

- Wannakon T, Dimu K, Autsiya A, Apiwongngam A, Sitalertpisan P, Tungjai M, **Thawinchai N**. Methodological evaluation of dual-energy X-ray absorptiometry for Cobb angle measurement in females with idiopathic scoliosis: a reliability and validity study in Thailand. *Asian Spine J.* 2026;20(2):323–32. (Q1, Impact factor 2.7)
- Wannakon T, Sitalertpisan P, Tungjai M, **Thawinchai N**. Outcomes of 16 weeks of combined exercises on Cobb angle, bone and muscle health, and quality of life in females with idiopathic scoliosis: a study protocol for a single-blinded randomised controlled trial. *BMJ Open.* 2025;15(8):e103899. (Q1, Impact factor 2.3)
- Kuvijitsuwan P, Klaphajone J, Singjai P, Kumpika T, **Thawinchai N**, Angkurawaranon C, et al. Validity and reliability of a finger training tool for assessing metacarpal phalangeal joint ranges of motion in asymptomatic participants. *Sci Rep.* 2024;14(1):20113. (Q1, Impact factor 3.8)
- Ruamsilp W, **Thawinchai N**, Sitalertpisan P, Peansukmanee S, Chamnongkich S. Comparison of saddles in hippotherapy for patients with chronic low back pain. *Veterinary Integrative Sciences.* 2023;21(3):821-30. (Q3, Impact factor 1.08)

- Kamnardsiri T, **Thawinchai N**, Parameyong A, Pholjaroen P, Wonglangka K, Prupetkaew P, Boripuntakul S. Conventional video-based system for measuring the subtask speed of the Timed Up and Go Test in older adults: Validity and reliability study. PLoS One. 2023;18(6):e0286574. (Q1, Impact factor 3.752)
- Parameyong A, Boripuntakul S, **Thawinchai N**, Chawawisuttikool J, Kamnardsiri T. Reliability and validity of the Swaymeter for measuring the trunk control in children with spastic cerebral palsy. Dev Neurorehabil. 2022;25(7):462-8. (Q4, Impact factor 1.907)
- Hanphitakphong, P, Keeratisiroj, O & **Thawinchai, N**. Smartphone addiction and its association with upper body musculoskeletal symptoms among university students classified by age and gender. Journal of Physical Therapy Science, 2021;33(5), 394-400. (Impact factor 0.812).
- Hanphitakphong, P, **Thawinchai, N** & Poomsalood, S. Effect of prolonged continuous smartphone gaming on upper body postures and fatigue of the neck muscles in school students aged between 10-18 years. Cogent Engineering, 2021;8(1), 1890368. (Q2, Impact factor 1.35).
- Tabsuri, T, **Thawinchai, N** Peansukmanee, S & Lugade, V. Feasibility study of inertia sensor technology on the pelvic and trunk kinematics during horseback riding in children. Veterinary Integrative Sciences, 2021;.19(1), 111-120.
- Hanphitakphong P, **Thawinchai N**. Validation of Thai Smartphone Addiction Scale-short version for school students between 10 to 18 years. Journal of Associated Medical Sciences. 2020;53(3):34-42.
- **Thawinchai N**, Funprom K. Effect of Carrying Style on Posture Score in Adolescents with Musculoskeletal Pain. CMUJ Nat Sci 2019;18:553-61. doi.org/10.12982/CMUJNS.2019.0036. (Q3, Impact factor 0.25).
- Keeratisiroj O, **Thawinchai N**, Siritaratiwat W, Buntragulpoontawee M, Pratoomsoot C. Prognostic predictors for ambulation in children with cerebral palsy: a systematic review and meta-analysis of observational studies. Disabil Rehabil. 2018;40:135-43. DOI: 10.1080/09638288.2016.1250119. (Q1, Impact factor 1.95).
- Peansukmanee S, **Thawinchai N**, Khanproa P, Khaminluang P. Feasibility Study of Inertial Sensor Technology on Ponies for Equine-Assisted Therapy (EAT). Kafkas Univ Vet Fak Derg. 2017;23 (6): 871-878. DOI: 10.9775/kvfd.2017.17833. (Q3, Impact factor 0.51).
- Keeratisiroj O, **Thawinchai N**, Buntragulpoontawee M, Siritaratiwat W. Derivation of an ambulatory prognostic score chart for Thai children with cerebral palsy aged 2 to 18. J Med Assoc Thailand 2016;99:1298-1305. (Q3, Impact factor 0.5).
- Keeratisiroj O, **Thawinchai N**, Siritaratiwat W, Buntragulpoontawee M. Prognostic Predictors for Ambulation in Thai Children with Cerebral Palsy Aged 2 to 18 Years. J Child Neurol. 2015;30: 1812-8. (Q2, Impact factor 1.55).

National Publication

- Tammaruckwattana S, **Thawinchai N**. Development of an Artificial Intelligence Body Pressure Sensing Mat for Pressure ulcer Prevention. Journal of Digital Communications. 2025;9(2):38–5.

- Bhumipraphat M, Tirosh R, Arunwattanachok P, Keeratisiroj O, **Thawinchai N**, Thunnithet P, et al. Cross-cultural adaptation and reliability of the water orientation test Alyn into Thai version: Preliminary study. *J Med BioSci*. 2024;6(2):147-56.
- Hanphitakphong P, **Thawinchai N**. Validation of the Smartphone Addiction Scale – Short Version for Thai Adolescents. *J Assoc Med Sciences*. 2020;53:34-42. (Thai-JIF 0.237)
- Arunwattanachok P, **Thawinchai N**, Indongloy M, Rungin J, Pichaiworaphat A, Prukmath K, Takam J, Kongaroon N. Behavior of School Bag Carriage and Its Average Weight in School Age Children. *Thai Journal of Physical Therapy* 2019; 41:16-9. (Thai-JIF 0.250)
- Angsupaisal M, **Thawinchai N**, Prathep W. Developmental performance of young children aged 1-42 months in Mueang Pitsanulok, Thailand: The Bayley-III Screening Survey. *International Journal of Child Development and Mental Health*. 2018;6:30-9. (Thai-JIF 0.0)
- Hanphitakphong P, **Thawinchai N**. Validation of Thai version of Smartphone Addiction Proneness Scale for adults. *J Psychiatr Assoc Thailand*. 2018;63:141-52. (Thai-JIF 0.217)
- Deesungnern S, **Thawinchai N**. A survey of factors associated with schoolbag carrying and pain during schoolbag usage in high school students of Darawittayalai School, Chiang Mai. *Thai J Phy Ther*. 2014; 36:70-78. (Thai-JIF 0.0)
- Hanphithakphong P, **Thawinchai N**, Ratnapinunchai, J. Effects of Knee Extensor Electrical Stimulation in Individuals with Spastic Diplegia. *Thai Journal of Physical Therapy* 2011; 33: 53-67. (Thai-JIF 0.208)
- Numdee K, **Thawinchai N**, Ratnapinunchai, J. Effects of Knee Extensor Electrical Stimulation in Combination with Isometric Contraction in Individual with Spastic Diplegia. *Thai Journal of Physical Therapy* 2011; 33: 68-77. (Thai-JIF 0.208)
- **Thawinchai N**, Tummachai A, Intaraksa P. Prevalence of obesity and comparison of the cardiovascular fitness in female undergraduate students, Faculty of Associated Medical Sciences, Chiang Mai University. *Bulletin of Chiang Mai Associated Medical Sciences*. 2010;43:211-217. (Thai-JIF 0.0)
- **Thawinchai N**, Westcott McCoy S. A single case study of effects of ankle-foot orthoses and strength training on functional mobility in children with cerebral palsy. *Thai Journal of Physical Therapy*. 2008; 30:12-25. (Thai-JIF 0.143)
- Sirilug Y, **Thawinchai N**, Siriphun K. Reliability of the modified ashworth scale (MAS) in children with spastic cerebral palsy. *Bull Chiang Mai Assoc Med Sci*. 2007; 40: 243-250. (Thai-JIF 0.0)
- **Thawinchai N**. Proprioception: How important is it for our movements? *Thai Journal of Physical Therapy*. 2006;28:52-58.
- Kokhayan C., Ratanapinunchai J., **Thawinchai N**. Heart rate variability during trail making test between subjects with regular exercise and subjects with physical inactivity. *Bull Chiang Mai Assoc Med Sci*. 2006; 39: 71-78.

Conference Publications

- Techahongsa P, **Thawinchai N**, Tammaruckwattana S. Development of an automatic control system for pressure monitoring for wheelchairs. In 2024 10th International Conference on Engineering, Applied Sciences, and Technology (ICEAST); IEEE2024. p. 27-33.
- **Thawinchai N**. Effects of maximum speed treadmill training on walking capability in children with cerebral palsy. Abstract. *Mov Disord*, 2020;35:S556. doi:10.1002/mds.28268.
- Thammachai, A., Saekho, S., **Thawinchai, N.**, Bhakdikul, T., Yarach, U., Chunpenmongkol, S. et al. The Study of Deception and Truth Using Functional Magnetic Resonance Imaging (fMRI). The International Society for Magnetic Resonance in Medicine 20th Annual meeting & exhibition, Melbourne, Australia, 2012, Page 2134.
- **Thawinchai N**, Shewokis P A, Orlin M. 2006. Intralimb coordination of children stepping over obstacles. First Joint Meeting of ESMAC & GCMAS (JEGM 2006)., 27 - 30 September 2006, Vrije Universiteit, Amsterdam, the Netherlands *Gait & Posture*, Volume 24, Supplement 2, December 2006, Page S193-S194.
- Lie, WY, **Thawinchai, N**, Palisano, R, Valvano, J. The inter-rater Reliability and Stability of the Gross Motor Function Classification System. Combined Sections meeting of the American Physical Therapy Association, Seattle, WA, *Pediatric Physical Therapy*, December 1999, Page 174-175.

Presentation

- Kuvijitsuwan P, Thawinchai N, Klaphajone J. 2026. Teaching biomechanical features of hemiplegic gait using opencap.ai: a validation study for case-based learning. Poster Presentation in the 12th International Conference on Education - ICEDU 2026, Bali, Indonesia, on March 26-28, 2026.
- Ruamsilp W, **Thawinchai N**, Silitertpisan P. 2023. Feasibility study of inertial measurement unit and pressure biofeedback unit on lumbopelvic mobility and stability in individuals with chronic low back pain. Oral Presentation in the 2nd National Conference on Natural Resource and Health Science: NACON-NARAHS, Faculty of Natural Resources, Rajamangala University of Technology Isan Sakonakhon Campus, Thailand, on February 14, 2023.
- **Thawinchai N**, Hanphitakphong P. 2019. Cross-cultural adaptation, translation, and validation of smartphone addiction scale-short version for Thai adolescents. Oral Presentation in the 19th International Conference of Public Health Sciences in collaboration with the 11th Teikyo-Harvard Symposium, Bangkok, Thailand, on October 2, 2019.
- **Thawinchai N**, Kaewsutthi M, Chamnongkich S, Peansukmanee S. Coordination of the movements of the pelvis and trunk and lower extremity in horseback rider. Poster with Oral Presentation in the 2015 HETI Congress, New Taipei City, Taiwan, on June 22-25, 2015.