

Supporting Narrative

As a classmate and colleague of Hsiao-Yean Chiu's, I am more than pleased to nominate Hsiao-Yean for applying Emerging Nursing Researcher Award of Sigma Theta Tau International Honor Society of Nursing. The supporting narrative is described as below according to the five criteria.

1. Completed and earned a doctorate after December 2012

I hereby certify that Hsiao-Yean Chiu completed and earned her doctorate at Graduate Institute of Nursing of Taipei Medical University in June 2013 (2008.09~2013.06). Enclosed the diploma for your record.

2. Demonstrated that research has had an impact in a country or global region on the profession, patients, families, community, or policy

Over the past five years, Hsiao-Yean has conducted a study series in investigating the sleep disturbances in patients with traumatic brain injury (TBI). Firstly, she revealed that daytime sleep duration plays a critical role in mediating the association between brain injury severity and cognitive function recovery during the first 7 day following TBI, and therefore suggested that nurses should provide concentrated nursing care, consider a limit on the number of visitors, decrease noise and light in patient environment, and encourage patients to have short naps in the afternoon in favor of improving their cognitive recovery (published in *International Journal of Nursing Studies*, 2014). Secondly, to deal with sleep disturbances of patients with TBI of chronic phase, her research suggests that healthcare providers also consider the managements of pain severity, anxiety, and depressive symptoms (published in *Journal of Head Trauma and Rehabilitation*, 2015). Sequentially, she conducted a retrospective cohort study by using a national database and showed that hypnotic use but not insomnia increases the risk of dementia in TBI survivors, which supported the needs of developing non-phrenological interventions for managing their sleep disturbances (published in *European Neuropsychopharmacology*, 2015). Lastly, she conducted a randomized controlled crossover trial and found that home-based warm footbath significantly improves sleep quality of TBI survivors (published in *Journal of Neuroscience Nursing*, 2017). Nurses can use home-based warm footbath as an effective intervention for management of sleep disturbances after TBI.

On the other hand, Hsiao-Yean has explored issues related to sleep from a perspective of evidence-based healthcare. She has found the best measurement tools (i.e., Insomnia severity index and STOP-BANG) for screening insomnia and obstructive sleep apnea (OSA) by using systematic review and metaanalysis approaches and suggests that sleep specialists can use the tools to conduct patient interviews for the early diagnosis of insomnia and OSA in clinical settings (published in *Journal of Psychosomatic Research*, 2016, and *Sleep Medicine Reviews*, 2017, respectively). In addition, she has explored the effects of nonpharmacological interventions for reliving sleep disturbances. For example, one of her study suggested that applying acupuncture, particularly the acupoint of *Sanyinjiao*, significantly increases the secretion of

estrogen and thus improves peri- and post-menopausal sleep quality (published in *Obstetrics & Gynecology*, 2016). Yet another study revealed that moderate-intensity walking exercise is effective in improving sleep in individuals with cancer (published in *Oncology Nursing Forum*, 2015).

The abovementioned findings provide solid evidence that all her research have substantial impacts in a country or global region on the profession, patients, community, or clinical policy.

3. Demonstrated a record of disseminating research results in professional nursing and/or non-nursing publications and oral and/or poster presentations.

To increase the visibility of nursing, Hsiao-Yean has disseminated research results by publishing approximately 30 articles in professional nursing and non-nursing publications (the publication list is as attached) and by attending oral and/or poster presentations (e.g., the 25th and 27th International Nursing Research Congress, the 43rd Biennial Convention hosted by Sigma Theta Tau International Honor Society of Nursing, and the 2017 World Sleep Congress) since 2013. All detailed information regarding the conference proceeding are listed as follows.

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1. D.A. Nichols, R.A. Miller, R. Jadrnicek, H.Y. Chiu, S.V. DeSalvo, K. S. Griffin, P.R. Hyde, D. Jónsson, J. K. Walsh, C. A. Kushida. (2013). Data Storage and Processing Procedures of a Sleep Research Data Management System. 27th Annual Meeting of the Associated Professional Sleep Societies, Baltimore. (*Poster presentation*)
 2. H.Y. Chiu, P.Y. Chen. (2013). A randomized, controlled pilot study of warm footbath for improving sleep complaints in patients with traumatic brain injury. The 12nd Taiwan Society of Sleep Medicine, Taipei. (*Poster presentation*, supported by MOST 106-2314-B-038 -058 –MY3)
 3. H.Y. Chiu, P.S. Tsai, P.Y. Chen. (2014). The Efficacy of Home-Based Walking Exercise on Sleep in Cancer Survivors: A Meta-Analysis of Randomized Controlled Trials. Sigma Theta Tau International's 25th International Nursing Research Congress, Hong Kong.
 4. H.Y. Chiu (2014). The effect of Mind-Body Interventions on Sleep in Cancer Patients: A Meta-analysis of Randomized Controlled Trials. Asia Pacific Nursing Research Conference, Taipei. (*Symposium*)
 5. H. Y. Chiu (2015). Daytime sleepiness is independently associated with increased falls in dementia: A population-based study. The 18th East Asia Forum of Nursing Scholars (EAFONS) Taipei. (*Poster presentation*)
 6. H. Y. Chiu, Y. J. Hsieh, P. S. Tsai (2015). Acupuncture improves menopause-related sleep disturbances: a meta-analysis of randomized controlled trials. Taiwan Evidence-Based Medical Association, Taipei. (*Poster presentation*)
 7. H. Y. Chiu, P. S. Tsai (2015). Sex difference in the association of sleep disturbances with cognitive impairment in elderly. Sigma Theta Tau International's 43rd Biennial Convention, Las Vegas, U.S.A. (*Oral presentation*, supported by MOST 103-2314-B-038 -068 –MY2)
 8. H. Y. Chiu, P. S. Tsai (2015). Diagnostic accuracy of insomnia screening tools: a
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meta-analysis. Sigma Theta Tau International's 27th International Nursing Research Congress, Cape town, South Africa. (*Oral presentation*, supported by MOST 103-2314-B-038 -068 –MY2)

9. H.Y. Chiu, P.Y. Chen, C. Guilleminault (2016). A Diagnostic Meta-analysis of Screening Questionnaires for Obstructive Sleep Apnea, 4th International Pediatric Sleep Association Congress, Taipei, Taiwan. (*Poster presentation*, supported by MOST 103-2314-B038-068-MY2).
10. H.Y. Chiu, P.Y. Chen (2017). Associations of sleep duration with suicidal ideation, plans, and attempts in adolescents: dose-response metaanalysis of observational studies. World Sleep 2017 Congress in Prague, Czech Republic. (*Poster presentation*, supported by MOST 106-2314-B-038 -058-MY3).
11. P.Y. Chen, H.Y. Chiu (2017). Impacts of Operative Time on Sleep Following Spinal Stenosis Surgery. World Sleep 2017 Congress in Prague, Czech Republic. (*Poster presentation*, supported by MOST 106-2314-B-038 -058-MY3).

4. Received external funding, university funding, or unique organizational support with justified unique context of funding as Principal Investigator (PI) or Co-PI.

Since Hsiao-Yean has served as an Assistant Professor of College of Nursing of Taipei Medical University, she has received five grants supported from the Ministry of Science and Technology Taiwan and affiliated hospitals of Taipei Medical University. The details are presented as below which demonstrates that Hsiao-Yean is an independent nursing researcher who can cooperate excellently with multidiscipline professionals.

Title of Projects	Investigator	Project Period	Budget Subsidy
Trajectory of quality of life and its predictors in patients with lumbar degenerative spine diseases before and after spinal surgery	PI	2015/06/01~ 2016/05/30	Taipei Medical University Hospital
Model Construction of the Relationships Among Mental Fatigue, Cognitive Functions, and Return to Productive Activity in Patients with Traumatic Brain Injury.	PI	2015/12/01~ 2016/07/31	Ministry of Science and Technology (R.O.C)
Comparative Effectiveness and Safety of Hypnotics for Insomnia in Elderly People: A Network Metaanalysis	PI	2017/03/01~ 2018/02/28	Shin Kong Wu Ho-Su Memorial Hospital
Prevalence, Risk Factors, and Impacts of Sleep Disturbances in Older Adults following Traumatic Brain Injury	Co-PI	2017/06/01~ 2019/05/31	Taipei Municipal Wanfang Hospital

Changes in cognitive functions in patients with recovery stage of traumatic brain injury: effects and mechanism of neurofeedback	PI	2017/08/01~ 2020/07/31	Ministry of Science and Technology (R.O.C)
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5. Recognized as an early-career investigator and emerging leader whose work is influencing practice, education, administration, research, and/or utilization of evidence

Hsiao-Yean and I have known each other for a long time since we studied in the doctoral program at Taipei Medical University. During our PhD studies, she showed thoroughly her passion and rich knowledge of healthcare research. Not only being actively involved in the class, but also leading peers for further discussion and in-depth thinking. In addition, she established her major research field- Sleep Disturbances-in no time and started to dig into relevant international research results, which intrigue her to expand her own works and aspire to learn deeply in the field of sleep. Furthermore, she even went all the way to Human Sleep Research Center of Stanford University in USA to improve her profession. The manner of learning is what makes her an excellent researcher and also lays the foundations of her research.

Back in PhD period, she showed her ability being an early career investigator by applying what she previously learned to her PhD thesis, e.g. biobehavioral measurement, neurofeedback therapy, etc, into her research by using both subjective and objective sleep parameters measurements. She put a lot of efforts to overcome all the problems and difficulties thus her PhD thesis is such a big success with complete and constructive results.

During her Post-Doc, she exhibited her role in emerging leader in research dimension. Other than numerous articles published, she kept keeping herself up to date and learnt all by herself regarding longitudinal data analysis, big data analysis, and metaanalysis. It was really a good opportunity to learn the method of meta-analysis from her. Appreciated her outstanding teaching skill and beneficial experience sharing. From the teaching, I could tell how discreet she is when it comes to research and how capable she is to write the articles. Her self-learning motivation and capability is without a doubt a solid epitome for other nursing researchers.

Currently, Hsiao-Yean and I are both served in School of Nursing, Taipei Medical University. Been told by students, she is a thoughtful and passionate teacher who teaches her students in accordance with their needs and motivates her students to always learn. From an administration perspective, she manages the issues and matters at once and contributes her full heart to nursing education. I believe she will make a tremendous achievement on nursing education with her positive traits.

Hsiao-Yean always loves to share her research ideas and knowledge with every single peer. I am honored to have this chance to introduce her marvelous characters and academic performance. Unquestionably with her magnificent contribution, not only the nursing field can be much valued globally, but also more learning and results can be brought to the international nursing peers.