

Wei-Hsin (Teresa) Hsiao

Qualification Summary

Expertise in epidemiologic study design and biostatistical analysis. Skilled in developing statistical analysis plan, conducting descriptive statistics, risk factor analyses, and statistical modeling in clinical trials and observational studies. Proficient in SAS, R, Excel, and GraphPad PRISM for statistical results generation and data visualization. Experience leading preparation for manuscripts and working as a co-author to review statistical deliverables.

Education

University of Pittsburgh, Graduate School of Public Health, Pittsburgh PA August 2018-Present

Doctor of Philosophy Candidate in Epidemiology

Dissertation: *“Multidimensional sleep health during pregnancy- The influences of prenatal mental health and racial discrimination.”*

Advisor and Mentor: Dr. Dara Mendez and Dr. Marquis Hawkins

Tulane University, School of Public Health and Tropical Medicine, New Orleans LA August 2016-May 2018

Master of Science in Epidemiology

Thesis: *“The association between pregnancy complications and adiposity in the childhood: The Bogalusa Heart Study.”*

Advisor: Dr. Emily Harville

Taipei Medical University (TMU), School of Public Health, Taipei, Taiwan September 2012-June 2016

Bachelor of Science in Public Health

Thesis: *“College Students’ Expectations About Pregnancy and Gender Differences.”*

Advisor: Dr. Yi-Hua Chen

Thesis and Dissertation

“Multidimensional sleep health during pregnancy- The influences of prenatal mental health and racial discrimination.”

October 2019-Present

This study described multidimensional sleep health during pregnancy and created a composite scoring through z score calculation using data from a multi-site cohort study (nuMom2b study). The study further assessed the cross-sectional and longitudinal associations between prenatal depression and sleep health and identified the moderation of the lifetime experiences of racial discrimination on the association between prenatal mental health and sleep health in pregnancy.

“The association between pregnancy complications and adiposity in the childhood: The Bogalusa Heart Study.”

August 2016-May 2018

This study examined the association between gestational hypertension, diabetes, and childhood adiposity in the offspring among children aged 4 to 12 from the Bogalusa Heart Study. Adiposity was measured through childhood BMI and skinfold thickness.

“College Students’ Expectations About Pregnancy and Gender Differences.”

September 2014-June 2016

This cross-sectional study described the expectation of birth among college students and associated factors for the low birth rate in Taiwan. A total of 380 college students aged 20-25 were enrolled from two colleges in Taipei, Taiwan.

Experience

University of Pittsburgh, Department of Emergency Medicine, Pittsburgh PA January 2020-Present

Graduate Research Assistant

- Assist with clinical trial studies using the educational modules intervention targeting emergency medical services (EMS) workers on sleep and fatigue improvement via mobile app and texting
- Track and monitor the recruitment and withdrawals at the agency and individual levels using GraphPad PRISM and SAS for descriptive statistics and data visualization
- Conduct data management, intend-to-treat, and per-protocol analyses using over 600,000 text responses on sleep and fatigue states during and after EMS work shifts

University of Pittsburgh, Department of Epidemiology, Pittsburgh PA January 2019-Present

Graduate Research Assistant

- Conduct a longitudinal study using accelerometers to assess sleep health and physical activity during the postpartum period
- Provide communication to all study participants; work towards delivering concise messaging so that individuals understood the basis of the research
- Import accelerometer data and generate reports on sleep health and physical activity using R-Studio
- First-authored manuscript publication for a pilot randomized controlled trials using personal health monitor intervention for sleep improvement during pregnancy
- Conduct data management and linear mixed-effect modeling to compare weight gain and obesity trends in postpartum women by sleep quality and physical activity using data from the National Longitudinal Survey of Youth 1997
- Assist with data extraction in a systematic review on physical activity and bone loss/hip fracture in older adults
- Participate in data extraction for a systematic review on weight change from pre- to postnatal period

Tulane University, Department of Epidemiology, New Orleans LA June 2017-June 2018

Student Research Assistant

- Assisted with data management using SAS of a longitudinal study focusing on the effects of Gulf oil spill and associated risk factors for reproductive-aged women's health
- Abstracted medical records and Teleform scanning of the records
- Assisted with the event report and administrative forms for Institutional Review Board approval

Ministry of Science and Technology, Taiwan September 2014-June 2016

Student Researcher

- Received study fundings from the Ministry of Science and Technology in Taiwan to conduct independent research on the project "College Students' Expectations About Pregnancy and Gender Differences."
- Conducted literature review and designed conceptual framework and statistical plan
- Developed study questionnaire and conducted a pilot study to endure validity and reliability of assessment tool
- Analyzed data with SAS, used chi-square test and logistic regression to identify important factors for fertility desire of college students and gender differences

Taipei Medical University, Taipei, Taiwan September 2014-June 2016

Student Research Assistant

- Enrolled participants and collected data on maternal psychopathology from pregnant hospital patients
- Participated in a clinical trial on positive activity intervention to improve maternal mental health and infant health; assisted with delivering educational modules to study participants and data collection
- Assisted with nationwide data collection on mental health survey in Taiwan among general population

Publications and Presentations

Publication:

- **Hsiao, W. H.**, Paterno, M. T., Iradukunda, F., & Hawkins, M. (2020). The Preliminary Efficacy of a Sleep Self-management Intervention Using a Personalized Health Monitoring Device during Pregnancy. *Behavioral Sleep Medicine*, 1-12.
- Hawkins, M. S., Levine, M. D., Buysse, D. J., Abebe, K. Z., **Hsiao, W. H.**, McTigue, K. M., & Davis, E. M. (2021). Sleep Health Characteristics among Adults Who Attempted Weight Loss in the Past Year: NHANES 2017–2018. *International Journal of Environmental Research and Public Health*, 18(19), 10170.
- Patterson P.D., Martin S.E., Brassil B.N., **Hsiao, W. H.**, Weaver M.D., Okersman T.S., Seitz S.T., Patterson C.G., Robinson K. (2021). The EMS Sleep Health Study: A cluster-randomized trial. Manuscript submitted for publication.

Presentation:

- **Hsiao W.H.**, Chen Y.H., Fertility desire and needs of college students in a low birthrate country: Are there differences between females and males. Oral presentation at the American Public Health Association Annual Meetings in Denver CO, November 2016
- **Hsiao W.H.**, Mendez D., Facco, F.L., Levine, M. D., Wallace M.L., Hawkins, M. S., Multidimensional sleep health during nulliparous pregnancy: A prospective study. Poster presentation at the Virtual SLEEP 2021, June 2021

Certifications and Skills

Certificate:

- Public Health Core Competency Exam, Taiwan Public Health Association (2015)

Computer applications:

- Study enrollment and withdrawal monitoring and data collection by RedCap
- Data management, biostatistical analysis, and data visualization by SAS, R, Excel, and GraphPad PRISM
- Literature review and citation management by Endnote and Excel

Leadership:

- Leading editor on public health monthly magazine at TMU on coordinating the interviews of public health experts, leading discussion on generating articles regarding latest public health issues

Language skills:

- Native in Mandarin Chinese, fluent in English

Awards

- College Student Research Scholarship, Ministry of Science and Technology, Taiwan (2015)