

# Pharmacology and Ethnopharmacology

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## Identifying Chinese herbal medicine for menstrual disorder: Implications from a nationwide database

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Menstrual disorder occurs in women during their reproductive age with a quite negative impact on their daily lives. Chinese herb medicine (CHM) is commonly used for menstrual disorder and the goal of this study is to investigate the prescription patterns of CHM for menstrual disorder by using a nationwide database. Prescriptions of CHM were obtained from two million beneficiaries randomly sampled from the National Health Insurance Research Database, a nationwide database in Taiwan. Take premenstrual syndrome (PMS) as an example for analyzing TCM use in menstrual disorder. The ICD-9 code 625.4 was used to identify patients with PMS. Association rule mining and social network analysis were used to explore both the combinations and the core treatments for PMS. During 1998-2011, a total of 14,312 CHM prescriptions for PMS were provided. Jia-Wei-Xiao-Yao-San (JWXYS) was the CHM which had the highest prevalence (37.5% of all prescriptions) and also the core of prescription network for PMS. For combination of two CHM, JWXYs with *Cyperus rotundus* L. was prescribed most frequently, 7.7% of all prescriptions, followed by JWXYs with *Leonurus heterophyllus* Sweet, 5.9%, and *Cyperus rotundus* L. with *Leonurus heterophyllus* Sweet, 5.6%. JWXYs-centered CHM combinations were most commonly prescribed for PMS. This is the first pharmaco-epidemiological study to review CHM treatments for PMS. Association rule mining and social network analysis could also use to analyze other menstrual disorder. The results of this study provide valuable references for further clinical trials and bench studies.

### Biography

Hsing-Yu Chen is a traditional Chinese medicine (TCM) doctor and internal specialist in the department of TCM, division of Chinese internal medicine and pediatrics, Chang-Gung Memorial Hospital (CGMH). He is interested in analyzing utilization patterns and effectiveness of traditional Chinese medicine (TCM) by using the National insurance database in Taiwan. The studied subjects include discovering herbal medicine network and core herbal treatments for menopause, pre-menstrual syndrome, primary dysmenorrhea, eczema, asthma, and breast cancer by using social network analysis and data mining on TCM prescription database.

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