

# Sleep and Depression in Perinatal Chinese Women

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## Sleep in the peripartum

Being a mother affects a woman's sleep condition (Jomeen & Martin, 2007).

Sleep changes and disturbances during the perinatal period affects 40% to 60% of women. Following childbirth, sleep continues to deteriorate in some women (Román-Gálvez, et al, 2018).



By 3 months after birth, maternal sleep has generally begun to improve, but does not necessarily return to pre-pregnancy levels (Obeysekare, et al., 2020).

## Sleep & PPD

Previous studies suggest that sleep disturbances during pregnancy might increase the risk of PPD. However, the existing findings are inconclusive.

Women who underwent insomnia treatment in late pregnancy reported fewer PPD symptoms than those who did not receive treatment (Khazaie, et al, 2013); No difference in sleep patterns between depressed and nondepressed mothers (Yu. et al., 2017);

A recent study found a significant prospective association between prenatal sleep and increased PPD, after adjusting for prenatal depression in a population sample of Finnish women (Pietikäinen, et al., 2019). There are several limitations of the Finnish study:

- Did not control for postpartum sleep disturbances; the increased risk of PPD might be contributed by concurrent sleep disturbances during the postnatal period.



## Sleep & PPD(continues)

- The measure used for PPD was the Center for Epidemiological Studies Depression Scale (CESD), which was not validated for measuring PPD.
- Cultural differences in perinatal care limit the generalizability of prior findings to Chinese women. In particular, postpartum care (“doing the month”) emphasized in Chinese culture may have significant impact on the relationship between sleep and depression.

## Aims & Hypothesis

The study is to contribute to the current literatures by clarifying the longitudinal relationship between sleep problems and PPD among perinatal Chinese women who experience the traditional postpartum practice of doing the month.

Therefore, we will examine the following hypotheses:

- Women who have poor maternal sleep during the third trimester of pregnancy would be more likely to have PPD.
- Support from the social network during the “doing the month” period would moderate the association between sleep and PPD.

## Method

- N=200
- Longitudinal design
- Three time points:

**Time 1:**  
28 weeks of pregnancy

**Time 2:**  
1 month after the childbirth

**Time 3:**  
10 months after the childbirth

## Measures of Social Support

### The Postpartum Social Support Questionnaire (PSSQ)

PSSQ is an 81 item self-report instrument that measures the degree of social support in the postpartum period (Hopkins et al., 1987; Heh et al, 2001). Items inquire about emotional and instrumental support received from spouse and others (e.g. parents and parents in-law) and each question is rated on a 7-point scale, scores from 1 to 7.

## Measures of Mental Health

### The Edinburgh Postnatal Depression Scale (EPDS)

EPDS (Cox et al., 1987) is a ten-item self-report instrument to assess symptoms of postpartum depression mothers. Items inquire about mood during the last 7 days and each question is rated on a 4-point scale, with higher scorers indicating a more severe PPD of the respondent

### Perceived Stress Scale (PSS)

PSS (Cohen & Williamson, 1988) is a 10-item self-rating instrument that are purported to form a unidimensional scale of perceived stress.

## Measures for Sleep

### The Pittsburgh Sleep Quality Index (PSQI)

PSQI will be used to capture habitual sleep data of the participants. The sum of scores for these components yields one global score ranging from 0 (no sleep problem) to 21 (severe sleep problem). A cut-off score of 5 or more is indicative of poor overall sleep quality (Buysse, et al., 1989).

### Actigraphy & Sleep Diary

Actigraphic sleep recording will also be used along with a sleep diary for one week at each assessment timepoint. Logistic regression analyses will be used to analyze the associations between subjective and objective sleep and postpartum depressive symptoms.

## Contact

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## References

Jomeen & Martin, 2007  
Román-Gálvez, et al, 2018  
Obeysekare, et al., 2020  
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Yu. et al., 2017  
Pietikäinen, et al., 2019  
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Heh et al., 2001  
Cox et al., 1987  
Cohen & Williamson, 1988  
Buysse, et al., 1989

## Expected Results and Implications

• We expect that sleep disturbances during pregnancy will predict postpartum depressive symptoms.

• The findings of this study may provide evidence for the potentially causal role of sleep in the development of PPD and inform future efforts in improving the prevention and treatment of PPD.