# 主論文の要旨

# Factors associated with postpartum depression among women in Vientiane Capital, Lao People's Democratic Republic: A cross-sectional study

「ラオスの首都ビエンチャンにおける産後うつと相関する因子: 横断研究

> 名古屋大学大学院医学系研究科 総合医学専攻 社会生命科学講座 医療行政学分野

> > (指導:山本 英子 教授)

Souphalak INTHAPHATHA

## [Introduction]

Postpartum depression (PPD) is a worldwide public health concern. The PPD prevalence is greater in developing countries than in developed countries. However, to the best of our knowledge, no papers on PPD in the Lao People's Democratic Republic (Lao PDR) have been published. This study aims to determine the prevalence of PPD and identify factors associated with PPD in Vientiane Capital, Lao PDR.

## [Methods]

This is a cross-sectional study which was approved by the National Ethics Committee for Health Research in Lao PDR (No. 035/NECHR). Written informed consent was obtained from all women. This study was conducted at four central hospitals: Mahosot Hospital, Mittaphab Hospital, Setthathirath Hospital, and Mother and Infant Hospital. Structured questionnaires were used to collect information from the study participants who were all women who visited the hospitals for postnatal care at 6–8 weeks postpartum from July to August 2019. Exclusion criteria were women who could not understand Lao language, had delivered twin babies, had thyroid disorders, and did not answer all the questions in the questionnaire.

The Edinburgh Postnatal Depression Scale (EPDS) was used to measure the depression in postpartum women. The Lao EPDS was validated by the two questions that identified depression in women at the time of the interview but not by the psychiatric diagnosis because there were no psychiatric specialists in Lao PDR. Of the 428 women, 43 were considered as having depression at the time of the interview. The sensitivity and specificity at three cut-off scores of EPDS for depression in this study were 67.4% and 65.2% at 8/9, 60.5% and 71.4% at 9/10, and 55.8% and 80.8% at 10/11, respectively. The cut-off score of 9/10 was finalized to define "suspected PPD" (EPDS  $\geq 10$ ) in this study. Chi-square test, Fisher's exact test, and multiple logistic regression analyses were employed. P < 0.05 was considered as statistically significant.

# Results

#### 1. Characteristics of postpartum women

Table 1 shows that the average age of postpartum women in Vientiane Capital was 28.1 years old. Most women were Lao-Tai, married or living with partners, and majority of women had monthly household income of 4,000,000 LAK or lower. Table 2 shows that most women had planned (intended) pregnancy (71.3%) and delivered baby at health facilities (98.8%).

#### 2. Relationship and social support

Approximately half women lived in nucleus families (47.7%) (Table 3). Of 424 women who were married or lived with their partner, most women answered that they had good relationship with their partner (84.0%), mother (89.3%) and mother-in-law (77.8%). In terms of social support, 77.1% of women had someone to help taking care of their baby other than their partners.

#### 3. History of depression

Of the 428 women, 99 women (23.1%) had a history of depression before the last pregnancy (95% CI 0.19-0.27), 111 women (25.9%) had a history of depression during the last pregnancy (95% CI 0.22-0.30). Among 424 women who were married or cohabiting, 41 women (9.7%) had partners with a history of depression (95% CI 0.07-0.13) (Table 4).

#### 4. Factors associated with suspected postpartum depression

Fig. 1 shows the EPDS score distribution among 428 postpartum women. There were 136 women (31.8%) whose EPDS was 10 or higher, and they were defined as "suspected PPD" in this study. Women whose last pregnancy were unintended (AOR = 1.66, 95% CI 1.00-2.73, P = 0.049), who were not satisfied with childbirth (AOR = 1.85, 95% CI 1.00-3.43, P = 0.049), and who had depression during pregnancy had significantly more suspected PPD than the others (AOR = 3.99, 95% CI 2.35-6.77, P < 0.001).

#### [Discussion]

To the best of our knowledge, this is the first report of a PPD study in Lao PDR. The prevalence of suspected PPD in this study was higher than those from other Asian countries. It has also been reported that the prevalence of postpartum mental disorders estimated by self-reported symptoms was significantly higher than that obtained by diagnostic assessments (20.8% vs. 16.1%). This study was conducted at central hospitals in the capital, and suspected PPD was defined based on the responses to the questions addressing self-reported symptoms. The prevalence of PPD diagnosed by psychiatrists or among women in provinces in Lao PDR might be lower than 31.8%.

A prospective study in South Korea revealed that unintended pregnancy contributed to PPD through marital conflict and low father's participation in child care. In our study, 27.8% of women had unintended pregnancy and there was no difference between women who had only one child from the last pregnancy and women who had two or more children. Public health facilities provide a family planning service free of charge in Lao PDR, however, the policy should be

strengthened to reduce unintended pregnancies.

Birth satisfaction is influenced by women's expectations before childbirth, but is comprised of various factors, such as safety, support, respect, privacy, and involvement in decision making. In our study, five women, all of whom had childbirth at places other than health facilities, were satisfied with their childbirth, although they were more likely to develop PPD. Further studies on birth satisfaction using a global scale measurement of birth satisfaction are needed to understand the relationship between PPD and birth satisfaction in Lao women. Supportive care during childbirth can supersede pain and complicated birth. The Lao government promotes institutional deliveries, therefore, healthcare workers, especially midwives, need to be trained to provide supportive care to women to enhance their confidence and comfort.

A systematic review reported that negative birth satisfaction was significantly associated with PPD in most studies on birth experience. The results in our study will be helpful for healthcare providers in Lao PDR to understand PPD and to identify women who may need mental care and support. It is important to improve training for primary healthcare providers to identify women at risk of PPD and those suffering from PPD as well as to increase awareness of PPD among pregnant and postpartum women and their families.

This study has some limitations. First, PPD was measured as suspected PPD using EPDS with the cut-off score being decided by questions specifically developed for this study. Second, the partner's history of depression was determined by the study participants' observation. Finally, the results of this study may not be representative of all Lao women in Vientiane Capital, because we only included women who visited central hospitals for postnatal care.

#### [Conclusion]

The incidence of suspected PPD was 31.8% among postpartum women in Vientiane Capital, Lao PDR. Unintended pregnancy, low birth satisfaction, and depression during pregnancy were significant factors associated with PPD. We believe that women should receive continuous support during pregnancy, including the postpartum period, to maintain their mental health. Health care service, especially family planning and supportive birth care, should be strengthened.