

## **DEPRESSIVE SYMPTOMS IN LATE PREGNANCY ARE ASSOCIATED WITH SLEEP DURATION, QUALITY, AND SYMPTOMS OF SLEEP DISORDERS**

*Signal TL<sup>1</sup>, Paine S-J<sup>1</sup>, Sweeney BM<sup>1</sup>, Muller DP<sup>1</sup>, Priston M<sup>1</sup>, Smith AAT<sup>1</sup>, Huthwaite M<sup>2</sup>, Lee K<sup>3</sup>, Gander PH<sup>1</sup>*

<sup>1</sup>Massey University, Wellington, New Zealand, <sup>2</sup>Otago University, Wellington, New Zealand, <sup>3</sup>University of California, San Francisco, USA

**Introduction:** It is well established that sleep duration and quality decline in late pregnancy and that there is an increase in the occurrence of certain sleep disorders. There has, however, been limited research focused on the possible association with depression during this life stage, which was the aim of the present study.

**Methods:** Women participating in the E Moe, Māmā: Sleep and Maternal Health in Aotearoa/New Zealand study provided demographic information and completed questions on sleep, symptoms of sleep disorders and the Edinburgh Postnatal Depression Scale (EPDS) between 35–37 weeks gestation. Scores on the EPDS were dichotomised as  $\geq 13$  vs  $< 13$  and logistic regression analyses were used to examine the association between sleep (duration, quality, snoring, breathing pauses, leg twitching, restless legs, insomnia) and significant depressive symptoms. All models included ethnicity, age, socioeconomic position, parity, prior history of depression, life stress, relationship status and sleep prior to pregnancy (with the exception of symptoms of restless legs).

**Results:** Data were obtained from 376 Māori (mean age = 28 y, SD = 6 y) and 713 non-Māori women (mean age = 32 y, SD = 5 y). Of those women, 17.8% scored  $\geq 13$  on the EPDS; 9.7% slept  $\leq 5$  hrs per night; 50.1% had  $< 3$  good nights of sleep in the past week; 21.9% frequently snored, 5.3% had breathing pauses, 13.6% had frequent leg twitching/jerking, 16.4% had restless legs and 80.5% reported insomnia symptoms. Logistic regression analyses showed that  $\leq 5$  hrs sleep per night (OR 3.7, 95% CI 2.0–7.2),  $< 3$  good nights of sleep a week (OR 1.5, 95% CI 1.1–2.1), frequent snoring (OR 2.1, 95% CI 1.4–3.2), frequent leg twitching (OR 2.7, 95% CI 1.6–4.5), and insomnia symptoms (OR 4.8, 95% CI 2.3–10.2) were independently associated with an EPDS score  $\geq 13$ . A history of depression, life stress and relationship status were also consistently associated with depressive symptoms but ethnicity, age, socioeconomic position and parity were not.

**Discussion:** Changes in sleep and symptoms of sleep disorders were independent predictors of significant depressive symptoms in late pregnancy, suggesting that maternity health care providers should be identifying women with sleep problems and referring them for further assessment and treatment.

<http://onlinelibrary.wiley.com/doi/10.1111/sbr.12082/abstract>