THE ASSOCIATION OF ANXIETY AND SLEEP DISTURBANCE DURING PREGNANCY WITH NEONATAL DEVELOPMENT

Rahmi Andrita Yuda[1 *], Amel Yanis[2], Hudila Rifa Karmia[3]

[1] Master Degree In Midwifery, Faculty of Medicine, Andalas University, Padang, Indonesia

[2] Department of Psychiatry, Faculty of Medicine, Andalas University, Padang, Indonesia

[3]Department of Obstetrics and Gynecology, Faculty of Medicine, Andalas University, Padang, Indonesia

** Corresponding Author: Rahmi Andrita Yuda, Master Degree In Midwifery , Faculty of Medicine, Andalas University, Padang, Indonesia, E-mail: rahmiandrita45@gmail.com, Phone: +62-82-287681454*

Abstract

Anxiety problems and sleep disturbances during pregnancy can reduce the Brain-Derived Neurotrophin factor which mediates the neural maturation and plasticity of the neonate's nerve cells, it can also increase cortisol levels. The decreased BDNF level and increased cortisol level can predict the development of neonates.This study aims to assess the association between maternal anxiety levels and sleep disturbances during pregnancy with neonatal development.

The research design was a cross-sectional study at several hospitals in the city of Padang, Indonesia. Pregnant Women who gave birth by cesarean delivery method with a gestational age of ≥ 37 weeks, Totally 78 pregnant women were recruited. Maternal Anxiety levels and sleep quality were assessed by Z-SAS and PSQI questionnaire, Neonatal BDNF levels and Cortisol level were taken from the umbilical cord blood and then checked using the ELISA method. Data were analyzed by *One-Way-Anova* and Independent T-test.

There is a significant Association between maternal anxiety levels and sleep disturbance

with neonatal brain development predicted by neonatal BDNF levels decreased and increase the cortisol levels. The more anxious and the poorer the quality of the mother's sleep during pregnancy, which can impact on the neonate's development.

Keywords: Anxiety, BDNF, Cortisol, Neonatal Brain-Development, Sleep

Introduction