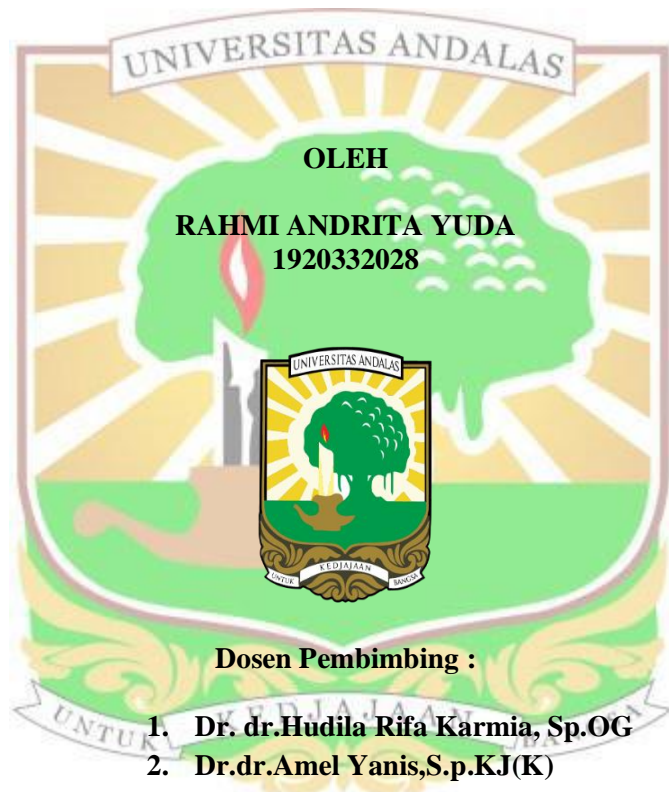


**HUBUNGAN TINGKAT ANSIETAS DAN KUALITAS TIDUR  
DENGAN KADAR *BRAIN DERIVED NEUROTROPHIC  
FACTOR (BDNF)* DARAH TALI PUSAT BAYI  
PADA IBU BERSALIN DI RUMAH SAKIT  
KOTA PADANG**

**TESIS**



**PROGRAM STUDI S2 ILMU KEBIDANAN  
PASCASARJANA FAKULTAS KEDOKTERAN  
UNIVERSITAS ANDALAS  
PADANG  
2022**

**HUBUNGAN TINGKAT ANSIETAS DAN KUALITAS TIDUR DENGAN  
KADAR *BRAIN DERIVED NEUROTROPHIC FACTOR* (BDNF)  
DARAH TALI PUSAT BAYI PADA IBU BERSALIN  
DI RUMAH SAKIT KOTA PADANG**

Rahmi Andrita Yuda, Hudilla Rifa Karmia, Amel Yanis

**ABSTRAK**

*Brain Derived Neurotrophic Factor* (BDNF) adalah faktor pertumbuhan yang berperan penting dalam perkembangan janin, dan merupakan prediktor patogenesis gangguan perkembangan saraf, gangguan perkembangan kognitif, dan emosional bayi. Kadar BDNF pada janin dipengaruhi oleh lingkungan intrauterin dan stressor psikososial. Ibu yang mengalami gangguan psikologis dan gangguan tidur semasa kehamilan dapat mempengaruhi BDNF darah tali pusat pada bayi. Penelitian ini bertujuan untuk mengetahui apakah terdapat Hubungan tingkat Ansietas dan kualitas tidur dengan kadar BDNF darah tali pusat bayi.

Desain penelitian adalah *cross sectional* dengan teknik *consecutive sampling*. Penelitian dilaksanakan di RS dr. Reksodiwiryo, RS Hermina, RS Universitas Andalas serta Laboratorium Biomedik Universitas Andalas mulai dari bulan November 2021 sampai Agustus 2022. Sampel penelitian ini adalah ibu bersalin SC dengan usia kehamilan  $\geq 37$  minggu tanpa penyakit penyulit sebanyak 78 orang. Tingkat kecemasan dan kualitas tidur dinilai dengan kuesioner, kadar BDNF diambil dari darah tali pusat bayi kemudian di periksa dengan metode ELISA. Data dianalisis dengan uji *One-Way-Anova* dan *T-Independent*.

Didapatkan hasil Ibu hamil tanpa ansietas dengan rerata kadar BDNF  $2,054 \pm 0,289$  ng/ml, ibu ansietas ringan nilai rerata kadar BDNF  $1,871 \pm 0,123$  ng/ml, ibu ansietas sedang nilai rerata kadar BDNF  $1,705 \pm 0,116$  ng/ml, ibu ansietas berat nilai rerata kadar BDNF  $1,561 \pm 0,2024$  ng/ml. Ibu hamil dengan kualitas tidur baik rerata kadar BDNF  $1,969 \pm 0,211$  ng/ml, sementara kualitas tidur buruk rerata kadar BDNF  $1,678 \pm 0,195$  ng/ml.

Kesimpulan penelitian ini terdapat hubungan yang signifikan antara tingkat ansietas dan kualitas tidur dengan kadar BDNF darah tali pusat bayi ( $p=0,00$ )

**Kata Kunci** :*Brain Derived Neurotrophin Factor*, Kualitas Tidur, Tingkat Ansietas

**THE ASSOCIATION OF ANXIETY LEVELS AND SLEEP QUALITY  
WITH *BRAIN DERIVED NEUROTROPHIC FACTOR* LEVELS IN FETAL  
CORD BLOOD TO MOTHER GIVING BIRTH  
AT HOSPITAL IN PADANG CITY**

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**ABSTRACT**

*Brain Derived Neurotrophic Factor* (BDNF) is a growth factor that plays an important role in fetal development. BDNF is a predictor of the pathogenesis of neurodevelopmental disorders, impaired cognitive and emotional development of infants. BDNF levels in the fetus are influenced by the intrauterine environment and psychosocial stressors. Mothers who experience psychological disorders and sleep disorders during pregnancy can affect umbilical cord blood BDNF in infants. This study aims to determine whether there is an association between anxiety levels and sleep quality with BDNF levels in fetal cord blood to mother giving birth at hospital in Padang city.

The research design was *cross sectional* study with *consecutive sampling* technique. The research was conducted at Dr. Reksodiwiry Hospital, Hermina Hospital, Andalas University Hospital and Andalas University Biomedical Laboratory starting from November 2021 to August 2022. The sample of this study were mothers who gave birth by cesarean delivery method with gestational age  $\geq 37$  weeks without complications as many as 78 pregnant women. Anxiety levels and sleep quality were assessed by questionnaire, BDNF levels 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*.

The results obtained for pregnant women without anxiety, the mean level of BDNF is  $2,054 \pm 0,289$  ng/ml, mild anxiety the mean value of BDNF level is  $1,871 \pm 0,123$  ng/ml, moderate anxiety the mean value of BDNF level is  $1,705 \pm 0,116$  ng/ml, severe anxiety the mean value of BDNF levels was  $1,561 \pm 0,2024$  ng/ml. Pregnant women with good sleep quality had the mean BDNF level of  $1,969 \pm 0,211$  ng/ml, while the mean BDNF level of poor sleep quality was  $1,678 \pm 0,195$  ng/ml.

The conclusion of this study is that there is a significant association between anxiety levels and sleep quality with BDNF levels fetal cord blood ( $p = 0.000$ )

**Keywords** : Anxiety Levels, Brain Derived Neurotrophic Factor, Sleep Quality,