

**DISERTASI**

**PENGEMBANGAN MODEL PREDIKSI KURANG ENERGI  
KRONIS PADA WANITA HAMIL BERBASIS WEB (MODEL  
ANGRAINI)**



Oleh

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## ABSTRAK

### PENGEMBANGAN MODEL PREDIKSI KURANG ENERGI KRONIS PADA WANITA HAMIL BERBASIS WEB (MODEL ANGRAINI)

**Dian Isti Angraini**

Kurang energi kronis (KEK) pada ibu hamil merupakan salah satu masalah kesehatan di negara berkembang, seperti Indonesia dengan prevalensi lebih dari 20%. Tujuan penelitian ini adalah membangun model prediksi kurang energi kronis pada ibu hamil (Model Angraini) yang dapat digunakan oleh tenaga kesehatan di layanan primer.

Penelitian ini menggunakan metode sekuensial eksplanatori, yaitu penelitian kuantitatif, dilanjutkan penelitian kualitatif, serta pengembangan model prediksi KEK pada ibu hamil berbasis web. Penelitian kuantitatif menggunakan rancangan case control, pada 190 orang ibu hamil di Kota Bandar Lampung. Faktor risiko langsung yang diteliti yaitu asupan makan, anemia, status protein rendah, status besi rendah, dan penambahan BB hamil, serta faktor tidak langsung meliputi IMT sebelum hamil, pendidikan, pengetahuan, pekerjaan, pendapatan keluarga, usia ibu, paritas dan pantang makan. Penelitian kualitatif pada 41 orang ibu hamil KEK dan 22 orang ibu hamil tidak KEK yang terpilih dari responden penelitian kuantitatif. Pengumpulan data dilakukan dengan wawancara mendalam menggunakan pedoman wawancara, alat perekam dan catatan lapangan, kemudian data dianalisis.

Hasil penelitian kuantitatif menunjukkan bahwa faktor risiko yang berperan terhadap KEK ibu hamil adalah asupan energi, asupan protein, asupan lemak, asupan zat besi, status besi, penambahan BB hamil, IMT sebelum hamil, dan paritas ( $p=0,004$ ,  $p=0,001$ ,  $p=0,001$ ,  $p=0,028$ ,  $p=0,044$ ,  $p=0,000$ ,  $p=0,000$ ,  $p=0,003$ ). Faktor risiko yang paling berperan adalah asupan lemak, status besi, penambahan BB hamil dan IMT sebelum hamil. Hasil penelitian kualitatif menunjukkan bahwa pada kelompok ibu hamil KEK memiliki persepsi salah, pengetahuan kurang, sikap negatif dan perilaku tidak benar mengenai faktor yang berkontribusi terhadap asupan makan dan KEK. Pembangunan model prediksi (Model Angraini) menggunakan analisis SEM dan diaplikasikan pada expert system berbasis web yang dapat diakses pada alamat [modelangraini.site](http://modelangraini.site).

Kesimpulan bahwa faktor langsung dan tidak langsung berperan terhadap KEK ibu hamil dan telah dihasilkan model prediksi KEK pada ibu hamil berbasis web.

*Kata Kunci: ibu hamil, KEK, model prediksi*

## ABSTRACT

### DEVELOPMENT OF CHRONIC ENERGY DEFICIENCY PREDICTION MODEL IN PREGNANT WOMEN WEB-BASED (ANGRAINI MODEL)

**Dian Isti Angraini**

Chronic energy deficiency (CED) in pregnant women is a health problem in developing countries, such as Indonesia with a prevalence of more than 20%. The purpose of this study was to build a predictive model of chronic energy deficiency in pregnant women (Angraini Model) that can be used by health workers in primary care.

This study uses an explanatory sequential method, namely quantitative research, followed by qualitative research, and the development of a web-based CED prediction model for pregnant women. Quantitative research using a case-control design, on 190 pregnant women in Bandar Lampung City. The direct risk factors studied were nutrient intake, anemia, low protein status, low iron status, and weight gain during pregnancy, as well as indirect factors including BMI pre-pregnancy, education, knowledge, occupation, family income, maternal age, parity, and food taboo. Qualitative research on 41 pregnant women with CED and 22 pregnant women without CED who were selected from quantitative research respondents. Data were collected by in-depth interviews using interview guides, recording devices, and field notes, then the data were analyzed.

The results of the quantitative study showed that the risk factors that play a role in CED pregnant women are energy intake, protein intake, fat intake, iron intake, iron status, weight gain during pregnancy, BMI pre-pregnancy, and parity ( $p=0.004$ ,  $p=0.001$ ,  $p=0.001$ ,  $p=0.028$ ,  $p=0.044$ ,  $p=0.000$ ,  $p=0.000$ ,  $p=0.003$ ). The most important risk factors are fat intake, iron status, weight gain during pregnancy, and BMI pre-pregnancy. The results of the qualitative study showed that the group of pregnant women with CED had wrong perceptions, lack of knowledge, negative attitudes, and incorrect behavior regarding factors that contributed to nutrient intake and CED. The construction of the prediction model (Angraini Model) uses SEM analysis and is applied to a web-based expert system that can be accessed at the address [modelangraini.site](http://modelangraini.site).

The conclusion is that direct and indirect factors play a role in the CED of pregnant women and a web-based CED prediction model has been produced for pregnant women.

*Keywords: pregnant women, CED, predictive model*