

***Expert System Early Detection types of Anemia in Pregnant Women Using the
Certainty Factor Method***

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ABSTRACT

High-risk pregnancy refers to the possibility of a pregnancy that can result in complications or dangers to both the pregnant mother and the fetus. One common high-risk condition in pregnant women is anemia. The World Health Organization (WHO) reports that around 35-75% of pregnant women experience anemia, and this percentage increases as the pregnancy progresses. Symptoms of anemia in pregnant women cannot be self-diagnosed at home, which requires pregnant women to take time and incur costs to visit a doctor at a community health center or nearby hospital. Therefore, an expert system has been developed to diagnose anemia in pregnant women using the certainty factor method. The certainty factor method was chosen for this research because it yields a higher success rate in the diagnostic process based on weighted values assigned to each symptom. Additionally, the certainty factor method can represent the level of confidence that an expert has in the problem at hand. The testing results using the confusion matrix method indicate an accuracy rate of 91.667%, while the user acceptance testing yielded a value of 85.3%.

Keywords: *Expert System, Certainty Factor, Pregnancy Anemia.*