ABSTRACT

Expert System for Early Detection of Toddler Stunting in Banyumas Regency using The Certainty Factor Method.

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The toddler phase is a critical stage where children are very vulnerable to experiencing nutritional problems, and one of the issues that often arise in this category is stunting, which is a condition that is influenced by various multidimensional factors, ranging from limited access to education in an area, lack of availability of nutritious food, lack of awareness and understanding of parents on the importance of optimal nutritional intake, to financial constraints that have implications for the limited fulfillment of children's nutritional needs. In this context, the research aims to design an innovative technology-based system that is able to carry out early detection of stunting in toddlers by applying the certainty factor approach, a probability-based method used to measure the level of certainty of a fact based on available evidence. The significance of this study lies in its urgency in dealing with stunting problems that can have a serious impact on children's growth and development, so an accurate and efficient strategy is needed to identify stunting symptoms as early as possible. The system designed in this study is oriented to provide convenience for parents in monitoring their child's condition by observing behaviors and signs that appear in the daily life of toddlers during the parenting period. The implementation of this expert system allows users to intuitively select symptoms that are suitable for the condition of toddlers based on the observations made, which are then processed using certainty factor calculations to produce an estimate of the likelihood of stunting in children. As an output of this study, an expert system was developed in a web-based format that is designed interactively, so that it can be easily accessed by users, allowing them to perform symptom analysis flexibly by entering the level of confidence in the observed symptoms, as well as obtaining the final result in the form of predictive calculations based on certainty factors. With the presence of this system, a practical and effective solution can be created as a tool that can be used in efforts to prevent stunting from an early age, providing more accurate insights for parents in taking the necessary steps to ensure optimal growth and development of toddlers.

Keyword: Certainty Factor, Stunting, Web