

**COMPARISON OF AHP-SMART AND ANP-SMART METHODS IN
DETERMINING HYPERTENSION RISK FACTOR AREAS AT
SUMBERJAMBE COMMUNITY HEALTH CENTER**

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ABSTRACT

Hypertension is one of the non-communicable diseases with a high prevalence in Indonesia and is known as a silent killer because it can trigger various serious complications. Jember Regency, particularly the Sumberjambe Public Health Center, has a relatively high prevalence of hypertension but has not yet conducted a regional analysis based on the potential risk factors for hypertension. This research aims to compare the AHP-SMART and ANP-SMART methods in determining hypertension risk areas and to design a website-based system to support decision-making. The risk factors used include obesity, smoking, lack of physical activity, excessive salt intake, excessive fat intake, and alcohol consumption. The research methods include needs analysis, weight calculation using AHP and ANP, regional priority calculation with SMART, comparison of the results of both methods, and system design and implementation based on PHP and MySQL. The research results show that the Consistency Ratio (CR) value for the AHP-SMART method is 0.0613, which is lower than that for ANP-SMART at 0.0864, making AHP-SMART considered more consistent. The conclusion of this study is that the AHP-SMART method is more suitable for determining areas at risk of hypertension in the Sumberjambe Public Health Center. The web-based system developed is expected to serve as a reference for policy formulation in efforts to control and prevent hypertension within the Sumberjambe Public Health Center's area of operation.

Keywords: *hypertension, risk factors, AHP-SMART, ANP-SMART*