

***The Relationship Between Body Mass Index and Hydration Status and Blood Pressure in
Hypertension Patients at Citra Husada Hospital Jember***

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ABSTRACT

Hypertension is a condition characterized by blood pressure levels exceeding normal limits, specifically a systolic pressure of more than 140 mmHg and a diastolic pressure of more than 90 mmHg. This condition can increase the risk of various complications, particularly in the cardiovascular system. The success of blood pressure control in patients with hypertension is influenced by various factors, including body mass index (BMI) and hydration status, which are related to fluid balance and blood volume in the body. This study aims to examine the relationship between BMI and hydration status with blood pressure in hypertensive patients undergoing inpatient care at Citra Husada Hospital in Jember. The study employed a quantitative approach using an analytical observational method and a cross-sectional design. The research was conducted from April to May 2026 and involved 38 inpatients with hypertension, both those with and without complications. Participants were selected using accidental sampling, with the criteria being age over 18 years, willingness to participate in the study, and the absence of cognitive or communication impairments. BMI was measured based on body weight and height data using a digital scale and a microtoise. Hydration status was assessed using a Tanita Bioelectrical Impedance Analysis (BIA) device, while blood pressure was measured using a digital sphygmomanometer. All data were analyzed using SPSS version 26.0 software with Spearman's rho correlation test. The results showed that the majority of participants fell into the Class I obesity category based on BMI and had normal hydration status. Statistical analysis indicated that BMI was not significantly associated with blood pressure ($p = 0.966$). Furthermore, hydration status also showed no significant association with either systolic blood pressure ($p = 0.081$) or diastolic blood pressure ($p = 0.205$) in hospitalized hypertensive patients.

Keywords : *hypertension, body mass index, hydration status, blood pressure*