

# THE RELATIONSHIP BETWEEN CAFFEINE INTAKE, SLEEP QUALITY AND NUTRITIONAL STATUS ON BLOOD PRESSURE

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**Background:** In developing countries, the age category 20-24 years is the highest age category of high blood pressure, 9.4% male and 8.9% female. In Indonesia, the incidence of high blood pressure  $\geq 18$  years was 25.8%. Blood pressure in students can be affected by caffeine intake, sleep quality and nutritional status.

**Objective:** This study aims to determine the relationship between caffeine intake, sleep quality and nutritional status with blood pressure.

**Methods:** This research was conducted at STT Wastukencana students using cross sectional research design and 82 subjects were selected by simple random sampling. Caffeine intake was measured using a semi-quantitative FFQ, sleep quality was measured by the PSQI questionnaire, nutritional status was measured by BMI, and blood pressure was measured with a digital sphygmomanometer. The relationship of each independent variable with systolic blood pressure was tested with Pearson product moment. The relationship of each independent variable with diastolic blood pressure was tested by rank spearman. The relationship of independent variables together with systolic blood pressure was tested by multiple linear regression.

**Results:** Subjects had high systolic blood pressure (61%) and high diastolic blood pressure (74.4%). Caffeine intake, sleep quality and nutritional status each have a relationship with systolic blood pressure and diastolic blood pressure. In the multiple linear regression test, caffeine intake ( $B=0.12$ ;  $p=0.004$ ), sleep quality ( $B=1.36$ ;  $p=0.001$ ) and nutritional status ( $B=1.25$ ;  $p=0.001$ ) were independent contributors of high systolic blood pressure. The poor quality of sleep subjects in this study can be caused by disturbances both before sleeping and during sleep.

**Conclusion:** High blood pressure can be affected by factors such as caffeine intake, sleep quality and nutritional status.

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