ABSTRACT

Overweight, Severe Meal Skipping, and High Blood Pressure among Maratua Island Adolescents, Indonesia

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Background : High blood pressure (BP) in adolescence tracks into adulthood and signals early cardiovascular risk. Excess adiposity and irregular eating are key modifiable drivers, but the evidence comes mostly from urban populations. Data from remote small-island fishing communities in Indonesia, with distinct food environments and limited health services, are lacking.

Objective : To estimate the prevalence of high BP and examine its association with nutritional status, meal skipping, sleep quality, and physical activity among adolescents on Maratua Island, Indonesia.

Research Methods/ Implementation Methods : This cross-sectional study involved 46 grade X students of SMAN 9 Berau in 2024. Nutritional status was assessed by BMI-for-age z-score (WHO 2007). BP was measured once and classified using the 2017 AAP guideline. Meal skipping, sleep quality (PSQI), and physical activity (IPAQ) were assessed by interview. Data were analysed using Fisher's exact test and multiple logistic regression.

Results : High BP was found in 15 adolescents (32.6%), including 28.3% at stage 1 or 2. It affected six of seven overweight/obese adolescents (85.7% vs 23.1%; p = 0.003) and 60.0% of severe meal skippers (vs 19.4%; p = 0.009). Overweight/obesity (aOR 28.54; 95% CI 2.47–329.30) and severe meal skipping (aOR 8.58; 95% CI 1.71–43.14) remained independently associated with high BP. Sleep quality and physical activity were not associated.

One in three adolescents on this remote island had high BP on screening, a hidden risk beyond urban settings. Excess weight and irregular meals are modifiable targets. School-based BP screening, weight management, and regular meals should be integrated into adolescent health programmes in island communities.

Keyword : adolescent hypertension; meal skipping; overweight; school health; small island