

Abstract

Fruit and Dairy Intake Is Associated with a Lower Risk of Elevated Blood Pressure in Adults in Sao Paulo, Brazil [†]

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Abstract: Background and objectives: Healthy eating patterns assessed by diet quality indexes (DQI) have been associated with a lower risk of elevated blood pressure (BP). However, DQI are based on different methodologies, and identifying specific components associated with BP may provide a better understanding of the population's dietary profile for targeted interventions. The objective of this study was to examine the association between elevated BP and components of four established DQI: the 2015 Healthy Eating Index (HEI), the Dietary Approaches to Stop Hypertension (DASH), the Alternative Healthy Eating Index (AHEI), and the Brazilian Healthy Eating Index (BHEI). Methods: The study sample comprised adults aged 19 years and older (n = 1235) from the 2015 Health Survey of São Paulo with Focus on Nutrition, a cross-sectional population-based study in São Paulo City, Brazil. Dietary intake was assessed through 24 h recalls, and diet quality was estimated by adherence to HEI, DASH, AHEI, and BHEI components. The National Cancer Institute method was used to estimate the usual intake of food and nutrients. Multiple logistic regression models were used to investigate associations of BP with components of each DQI, adjusted by sociodemographic, lifestyle, and dietetic variables. Analyses were performed in Stata 14.2, and considered statistical significance at $p < 0.05$. Results: Higher scores in all DQI investigated were associated with being older, female, self-identifying as White or Asian, having higher household income per capita, and being classified as an under-reporter. Individuals with higher scores in dairy components (HEI: OR 0.81, 95%CI 0.70–0.92; BHEI: OR 0.83, 95%CI 0.72–0.96; DASH: OR 0.76, 95%CI 0.60–0.97), and fruit components (HEI: OR 0.72, 95%CI 0.56–0.92; BHEI: OR 0.77, 95%CI 0.61–0.98; AHEI: OR 0.82, 95%CI 0.67–0.99) had a lower occurrence of elevated BP. Discussion: Our findings suggest that the consumption of fruit and dairy within DQI recommendations may provide health benefits regarding BP. The disparities in diet quality across sociodemographic groups of adults in São Paulo City indicate the need for public health messages toward improving food consumption, particularly among those with greater vulnerability.



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Institutional Review Board Statement: This investigation was performed in accordance with the Brazilian Law #5534 from 14 November 1968, which guarantees the confidentiality of the information collected by all national censuses. All ethical principles laid down in the Declaration of Helsinki and in the Brazilian Resolution Number 196/96 on research involving human subjects were followed. The 2015 ISA-Capital (protocols 36607614.5.0000.5421), as well as the present study (protocols 48960621.9.0000.5421), were approved by the Institutional Review Board of the School of Public Health, University of São Paulo.

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