

A12 Healthy eating index and abdominal obesity among aboriginal children in Negeri Sembilan

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Healthy Eating Index (HEI) is one of the commonly-used indicators for assessing dietary quality. Better dietary quality is known to be protective towards obesity however there is a continuing need to examine the relationship between the HEI and abdominal obesity especially among aboriginal children. This study aims to determine the relationship between HEI and abdominal obesity among aboriginal children. An analytical cross-sectional study was conducted among primary school aboriginal children aged 7-12 years old in Negeri Sembilan and their respective parents. The HEI score (HEIs) and HEI component scores (HEIcs), were calculated based on diet data from Semi-quantitative Food Frequency Questionnaire (SFFQ). Waist circumference (WC) was obtained and compared to WC percentiles chart and cut-off points to determine the abdominal obesity status. All data was analysed using SPSS. The prevalence of abdominal obesity among aboriginal children was 18.7%. According to HEI, 49% of children had diet that requires improvement (Σ HEIs<80). Girl was significantly associated with abdominal obesity ($\chi^2=4.192$, $p=0.041$). Children aged 10-12 years old have significantly larger waist circumference ($t=-6.641$, $p<0.001$); higher HEIcs for legumes ($t=-2.378$, $p=0.020$) and dairy ($t=-3.586$, $p<0.001$). Compared to girls, boys have significantly higher HEIcs for meat, poultry and eggs ($t=0.424$, $p=0.003$). The Σ HEIs ($t=-2.008$, $p=0.046$) and HEIcs for fruit intake ($t=-2.259$, $p=0.025$) was significantly higher in children from family with household size >5 members. Children lived with single parents had significantly higher HEIcs for fruits ($t=4.360$, $p<0.001$), meat, poultry and eggs ($t=2.845$, $p=0.005$) and fish and seafood ($t=5.027$, $p<0.001$); but significantly lower HEIcs for legumes ($t=-0.363$, $p=0.013$). Temuan children had significantly higher HEIcs for cereal ($t=0.558$, $p=0.036$) and legumes ($t=2.751$, $p<0.001$) whereas Semelai/ Jakun ($t=0.019$, $p<0.001$) children had significantly higher HEIcs for meat, poultry and eggs. No significant relationship was observed between waist circumference and HEIs. HEI provide comprehensive assessment of diet quality; however, not in relation with abdominal obesity among aboriginal children. Longitudinal studies are needed to evaluate whether HEIs predicts risk of abdominal obesity among aboriginal children.