

A Randomized Control Trial Intervention to Combat Childhood Obesity in Negeri Sembilan: The Hebat! Program

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Abstract : This study aims to develop and evaluate an intervention to improve eating habits, active lifestyle and weight status of overweight and obese children in Negeri Sembilan. The H.E.B.A.T! Program involved children, parents, and school and focused on behaviour and environment modification to achieve its goal. The intervention consists of H.E.B.A.T! Camp, parent's workshop and school-based activities. A total of 21 children from intervention school and 22 children from control school who had BMI for age Z-score $\geq +1SD$ participated in the study. Mean age of subjects was 10.8 ± 0.3 years old. Four phases were included in the development of the intervention. Evaluation of intervention was conducted through process, impact and outcome evaluation. Process evaluation found that intervention program was implemented successfully with minimal modification and without having any technical problems. Impact and outcome evaluation was assessed based on dietary intake, average step counts, BMI for age z-score, body fat percentage and waist circumference at pre-intervention (T0), post-intervention 1 (T1) and post-intervention 2 (T2). There was significant reduction in energy (14.8%) and fat (21.9%) intakes (at $p < 0.05$) at post-intervention 1 (T1) in intervention group. By controlling for sex as covariate, there was significant intervention effect for average step counts, BMI for age z-score and waist circumference ($p < 0.05$). In conclusion, the intervention made an impact on positive behavioural intentions and improves weight status of the children. It is expected that the HEBAT! Program could be adopted and implemented by the government and private sector as well as policy-makers in formulating childhood obesity intervention.

Keywords : childhood obesity, diet, obesity intervention, physical activity

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