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Adolescence Healthy Weight Maintenance Program in Pendang, Kedah

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Introduction:

The National Health and Morbidity Survey 2022 showed that one-third of Malaysian adolescents aged 13-17 are affected by overweight and obesity (1). This may pose a greater health risk for adolescents and is associated with an earlier onset of various Non-Communicable Diseases (2,3). This study aims to review the changes following a school-level healthy weight intervention program and explore factors that affect adolescents' weight.

Methods:

A group of adolescents with BMI ≥ 25 kg/m² from SMK Tunku Temenggung (SMKTT), Pendang, Kedah, participated in a structured lifestyle intervention program from March to October 2025. Body Mass Index (BMI), Skeletal Muscle Mass (SMM), Percentage of Body Fat (PBF), and Basal Metabolic Rate (BMR) were measured with an In-Body Analysis machine. A self-reported questionnaire was utilized to gain insights into factors affecting adolescents' weight.

Results:

Fifty-two adolescents aged 15-16 participated in this program (63.5% male). Among those who completed all modules (n=44), targeted BMI reduction of 1kg/m² was achieved in 16.7% (by 3 months) and 21.2% (by 6 months). Following intervention, their BMR remained lower than expected for their age (1488.29 versus 1812.76 kcal). There was an increase in average SMM from 27.97 to 28.14 kg and the PBF was slightly reduced from 42.73% to 42.26%. The adolescents reported a sedentary lifestyle, an imbalanced diet, and having mental health issues as factors affecting their weight. Furthermore, lack of guidance and the marketing of unhealthy food were perceived as barriers to attain an ideal weight.

Conclusion:

Structured lifestyle interventions in a healthy weight maintenance program at SMKTT have demonstrated a reduction in BMI among the participants. Changes in BMR, SMM, and PBF were also observed. Factors that may affect the adolescents' weight should be emphasized in future study.