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### Prevalence and Determinants of Overweight/Obesity among School-Aged Adolescents in the United Arab Emirates: A Cross Sectional Study of Private and Public Schools

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**Objectives:** The United Arab Emirates (UAE) identified childhood obesity as a target for public health action. This study investigated the prevalence of obesity and factors influencing obesity among adolescents in the UAE.

**Design:** Cross-sectional study.

**Settings:** Private and public secondary schools.

**Participants:** Adolescents aged 13–19 years (N = 932) selected through cluster sampling; 434 (46.6%) from private schools and 498 (53.4%) from public schools.

**Measures:** Self-report questionnaires were used to collect data on adolescents' sociodemographic factors, fruit/vegetable (F/V) intake, and physical activity. Participants' weight, height, waist circumference (WC), hip circumference (HC), and body fat percentage (%BF) were measured, and waist to height ratio (WHtR), waist to hip ratio (WHR), and body mass index (BMI) were calculated. Overweight/obesity was determined by BMI (BMI  $\geq$ 85th percentile for age), abdominal obesity (AO) (measured by WC, WHtR, and WHR) and %BF. Multiple logistic regression analyses were conducted to determine the predictors of obesity.

**Results:** In total, 34.7% of participants were overweight/obese (BMI  $\geq$ 85th percentile) and 378 (40.6%) had high %BF. AO was noted in 47.3%, 22.7%, and 27.1% of participants as evaluated by WC, WHR, and WHtR, respectively. Significantly more participants from public schools were overweight/obese (BMI  $\geq$ 85th percentile) compared with their private school counterparts (37.8% vs. 31.1%). Similarly, significantly more participants from public schools had AO (WC, WHR, WwHtR) than those from private schools. F/V intake and physical activity were the strongest predictors of obesity in participants: BMI (odds ratios [ORs] = 1.88 and 2.21, respectively), AO (WC: ORs = 1.54 and 1.78, respectively; WHtR: ORs = 1.35 and 1.64, respectively), and %BF (ORs = 2.43 and 1.46, respectively).

**Conclusions:** This study highlights the need for nutritional and physical activity interventions, with sustained strategies to fight obesity in adolescents. In addition to BMI, AO must be considered when estimating obesity in adolescents.

**Keywords:** Adolescents, obesity, body mass index, abdominal obesity, body fat percentage, public schools, private schools, fruit and vegetable intake, physical activity.