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PhD Dissertation Defense

Entitled

*PREVALENCE OF AND FACTORS ASSOCIATED WITH OVERWEIGHT, OBESITY AND METABOLIC
SYNDROME AMONG SCHOOL CHILDREN AND ADOLESCENTS IN RAS AL KHAIMAH, UNITED
ARAB EMIRATES – 2016-2017*

by

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Abstract

The prevalence of childhood obesity is reported to be increasing rapidly in the United Arab Emirates (UAE). Excess adiposity is a key independent risk factor for the future development of cardio-metabolic disorders such as metabolic syndrome. Population-based studies using representative samples are required to provide accurate and valid estimates of obesity and metabolic syndrome. Currently, there is a dearth of pediatric obesity research conducted in the emirate of Ras Al Khamimah. The aim of this study was to estimate the prevalence and factors associated with obesity and metabolic syndrome among school children in Ras Al Khaimah, UAE. Using a cross sectional study design, a random representative sample of children (N=1184; 43% males) aged 6-18 years was recruited from government and private schools in Ras Al Khaimah, during the academic year 2016-2017. Participants completed a questionnaire collecting socio-demographic and lifestyle behaviour data. Anthropometric (i.e. height, body mass and waist circumference) and blood pressure measurements were conducted using standard procedures. Body mass index-derived estimates of obesity were calculated using three international cut-offs: Center for Disease Control and Prevention (CDC), the International Obesity Task Force (IOTF), and the World Health Organization (WHO). Participants aged 10-18 year (N=413) provided a fasting venous blood sample to assess fasting blood glucose, lipid levels, and glycated haemoglobin. Metabolic syndrome was classified using the International Diabetes Federation criteria. The overall prevalence of combined overweight/ obesity was 37.2% (CDC), 37.7% (IOTF), and 40.1% (WHO). The prevalence of metabolic syndrome was 6.6% (11.4% males, females 3.1%, P=0.001). Multivariate logistic regression identified that mother obesity was positively associated with childhood overweight and obesity ($p < 0.05$). Father education, dark vegetables and full fat milk were negatively associated with overweight and obesity ($p < 0.05$). This study confirms a high prevalence of overweight and obesity among children and adolescents in Ras Al Khaimah. Mother obesity, Father education, full milk and dark vegetables were identified as correlates of childhood obesity. The prevalence of metabolic syndrome will continue to increase unless school-based obesity interventions are implemented across the UAE. This is the first study in RAK estimated the prevalence of overweight and obesity since 18 years using 3 international BMI definitions. investigated the associated factors of childhood obesity.

Keywords: adiposity, adolescents, children, lifestyle, metabolic syndrome, pediatric obesity, prevalence.