

The distribution and burden of cardiometabolic risk factors by BMI class in United Arab Emirates**Fatima Al Maisary**

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Noncommunicable diseases in the United Arab Emirates are on the rise and appearing in young adults, earlier than other nations. The top leading causes of death in the UAE are cardiovascular disease, type 2 diabetes and cancer. Obesity is a known risk factor associated with these diseases and reported to raise risk for cardiovascular disease by 3 folds and diabetes by 2 folds. In addition to obesity, these complex diseases are also associated with abnormalities in cardiometabolic markers such as glycaemia, increased glycated hemoglobin, central obesity, dyslipidemia and hypertension.

Objective: The objective of this study is to investigate the burden of cardiometabolic risk factors according to BMI categories in young adults aged 18 to 40.

Methods: Participants from the UAE Healthy Future Study were the study population. Demographic, health and behavioral data was collected through self-reported questionnaires. Anthropometric data and blood pressure were measured and blood samples were collected. Cardiometabolic risk factors were analyzed by age, gender and BMI class. Crude and adjusted prevalence rates were estimated.

Results: A total of 5,126 eligible participants were recruited from February 2016 to December 2018. The age-adjusted prevalence was 30% (95% CI 28.7 - 31.3%) and 26.5% (95% CI 25.2 - 27.7) for overweight and obesity, respectively. Cardiometabolic markers significantly increased as BMI increased across both genders. The burden of abnormal metabolic factors is 3 folds higher in obese people compared with those of normal-BMI. Smoking was found associated with increased burden of metabolic risk factors. In the other hand, low physical activity was not found associated with the burden.

Conclusions: Cardiometabolic abnormalities are clustering in Emirati young adults. Clustering is associated with weight gain and obesity. Further research is being done to investigate how clustering manifests in young adults to prevent the early rise of noncommunicable diseases in the United Arab Emirates.