An-Najah National University (ANNU)

Metabolic syndrome and psychostimulants and cognitive enhancers use: Association, risks, and benefits

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Abstract

Non-communicable diseases including cardiovascular disease and diabetes have become the leading mortality among Palestinians and had increased sharply in the West Bank in the last decades. Despite the increased prevalence of psychostimulants use in Palestinian students, their association with metabolic syndrome (MetS) is a neglected health issue in previous national studies. This study aimed to determine the association between MetS and the use of different psychostimulants and cognitive enhancers among young Palestinians.

A cross-sectional study was conducted in 2020 among young adults aged 18-25 years at An-Najah National University (ANNU) in the West Bank. MetS was diagnosed according to National Cholesterol Education Program (NCEP-ATPIII).

The number of participants in this study was 392 (46.9% males, 53.1% females). The prevalence of MetS was 9.2% (14.1% in males vs 4.8% in females, p-value 0.001). The prevalence of the substances used in this study was as the following, cigarettes 20.2%, water pipes 28.6%, electrical-cigarettes smoking 5.6%, energy drinks 39%, coffee 83.9%, and tea 84.7%. The binary regression revealed that cigarette smoking was significantly associated with increased risk of MetS (OR=3.48, p-value=0.009) while tea consumption was significantly associated with decreased risk of MetS (OR=0.37, p-value=0.032). Water pipe smokers were at a higher risk of having high triglyceride levels (OR=5.18, p-value=0.027).

Findings of the present study indicate that cigarette smoking is associated with a higher risk of MetS while tea consumption is associated with a lower risk of MetS. These findings significantly impact public health for Palestinians and in other countries with a high incidence of smoking and metabolic syndrome. The results will provide insight into the extent of MetS burden in Palestine and explore new risk and protective factors among target groups. Further investigations are needed to establish whether smoking cessation and tea consumption can prevent the occurrence and development of metabolic syndrome.