



Original article

Prevalence of metabolic syndrome and associated socioeconomic and demographic factors among Palestinian adults (20–65 years) at the Gaza Strip

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ABSTRACT

Objectives: Metabolic syndrome (MetS) is a multifaceted syndrome and has been described as a clustering of several risk factors for cardiovascular disease. This study was conducted to estimate the prevalence of MetS and its individual components among Palestinian adults, 20–65 years old in Gaza Strip. In addition to find any possible associations with socioeconomic and demographic factors.

Material and methods: The study sample included 230 adults aged 20–65 years. Data were collected by questionnaire interviews, anthropometrics, and biochemical analysis that included: serum glucose, total cholesterol, triglyceride, HDL, and LDL. MetS was defined according to the NCEP/ATP III diagnostic criteria.

Results: Overall prevalence of MetS was 23.0% among the study subjects, with no significant differences between males (18.1%) and females (28.1%). The prevalence of MetS increased significantly with age and was associated significantly with physical activity and marital status, while no significant associations were found with household income; geographical locality; smoking; watching TV; or family history.

Conclusions: Age, sex, physical activity and marital status are risk factors independently associated with MetS in the Palestinian population at the Gaza Strip. National health awareness and preventive programs should be established aiming at decreasing of MetS trends in the Palestinian population at Gaza Strip.

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1. Introduction

Metabolic syndrome (MetS) is a multifaceted syndrome that is very common in the general population [1]. MetS has been described as a cluster of multiple, partially or fully expressed, metabolic abnormalities within the single individual that increase the risk of developing cardiovascular disease and diabetes [2,3]. These metabolic abnormalities include hypertension, dyslipidemia, obesity, and impaired glucose tolerance [4–6]. MetS was also known as syndrome X, cardiometabolic syndrome, insulin resistance syndrome, Reaven's syndrome, CHAOS (an abbreviation for coronary artery disease, hypertension, atherosclerosis, obesity, and stroke), and the Deadly Quartet [7–9].

Despite of sex, patients with MetS have about twofold increased risk of mortality from coronary heart disease and cardiovascular disease [10,11]. Although the pathogenesis of the syndrome is not completely understood, it is influenced by a complex interplay

between multiple genetic variations interacting with numerous environmental factors [12,13].

A comprehensive diagnostic set of criteria for MetS was indicated by the experts of the National Cholesterol Education Program (NCEP)-Adult Treatment Panel (ATP) III (commonly known as NCEP-ATPIII criteria). The NCEP-ATPIII diagnostic criteria for MetS are considered as major reference for many researchers in this field. According to NCEP-ATPIII criteria the presence of three of five risk factors: increased waist circumference (WC), low level of high-density lipoprotein (HDL), high triglycerides (TG), elevated blood pressure (BP), and impaired fasting glucose, fulfills the criteria for the diagnosis of MetS [14].

The prevalence of MetS in adult population worldwide varies from 8% to 24.2% in men [15,16] and from 7% to 46.5% in women [17,18]. Differences in genetic background, diet, levels of physical activity, population age and sex structure, levels of over – and under nutrition, and body habits all influence the prevalence of MetS and its components [19]. Scientific studies on the clustering of MetS risk factors in the Palestinian population at Gaza strip are not available. Therefore, we designed the present study which aims to estimate the prevalence of the MetS and its individual components in Palestinian adults, 20–65 years old, residing at the Gaza Strip according to the NCEP-ATPIII diagnostic criteria.

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