



## Dietary Approach And Its Relationship With Metabolic Syndrome Components

<sup>1</sup>Adnan S Bajaber, <sup>\*2</sup>Hala M. Abdelkarem and <sup>1</sup>Asmaa M El-Mommten

<sup>1</sup>King Saud University, Faculty of Food Science & Agriculture, Nutrition Department, Riyadh, Saudi Arabia

<sup>2</sup>National Research Center, Nutrition Department, Dokki, Giza, Egypt.

**Abstract :** Metabolic syndrome is a constellation of conditions that increases a risk of diabetes and cardiovascular disease. The objective of this study is to investigate the association between dietary behaviour and the prevalence of metabolic syndrome (MS), and/or its components among female teachers living in cities and villages in Al-Ahssa region, Saudi Arabia. Six hundreds of female teachers, aged 30–55 years, were recruited at random from among different primary schools living in cities and villages in the Al-Hassa region, Saudi Arabia. Each participating subject submitted a general questionnaire containing demographic and medical history, as well as a food frequency questionnaire. Anthropometric and systolic and diastolic blood pressure was carried out. The prevalence of MS among the study sample, in accordance with AHA/NHLBI and ESC/ESH criteria, was 28% and 24% respectively, and increased significantly with the increase in age ( $P < 0.05$ ). There was a significant association between the prevalence of MS and obesity, diabetes and high blood pressure (BP) ( $P \leq 0.05$ ). It showed that a significant association between soft drinks and the appearance of the remaining indicators of MS. We found that waist circumference (WC) was ranked first (27%), followed by low HDL-C, (21.3%;  $P \leq 0.05$ ), high BP (19%), high fasting blood glucose (FG) (18.3%) and high triglycerides (TG) (12%) respectively, in accordance with AHA/NHLBI. By the definition of ESC/ESH, WC was ranked first (22.6%;  $P \leq 0.05$ ); high BP was ranked second (17%); after that came high FG (16.6%), low HDL-C (14.6%) and high TG (116%) respectively. In regarding to the prevalence of MS, there is no significance difference of females living in cities and village. This study indicated that the prevalence of MS has increased significantly with the increase in age among the study sample. Healthful dietary patterns were associated with a reduced risk for MS in Saudi women at middle age.

**Key Words:** Metabolic syndrome, lipid profiles, nutrition behavior, serum glucose and middle age.