

# Evaluation of the frequency of metabolic syndrome in Turkish adolescents and the affecting factors

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## Abstract

The metabolic syndrome is a public health problem that is more common with the changing habits and the effect of increasing obesity. The aim of this study is to assess the frequency of the metabolic syndrome in Turkish adolescents and the affecting factors. The study was conducted with 382 adolescent children aged 10-17 years. The data were collected using a face-to-face interview method with questionnaire form. The questionnaire contains general information, nutritional habits, physical activity status, some biochemical blood data and anthropometric measurements of the adolescents. Analyses were evaluated with appropriate statistical methods. 38.7% of the participants were male (n=148) and 61.3% were female (n=234). It was determined that 90.2% of the females and 72.3% of the males entered puberty. 33.5% of the people consumed three main meals regularly every day. The most frequently skipped main meal was morning breakfast (52.8%). More than half of adolescents (56.5%) consumed fast food. 37.2% of the females and 55.2% of the males had metabolic syndrome. A statistically significant difference was found between the presence of metabolic syndrome and gender status ( $p<0.05$ ). 53.3% of those with metabolic syndrome frequently consumed fast food and this was statistically significant ( $p<0.05$ ).

Fasting blood glucose level, triglycerides and TG: HDL ratio in females with metabolic syndrome was high compared to those without metabolic syndrome ( $p<0.05$ ). Similarly, fasting blood glucose level, total cholesterol, triglyceride, TG: HDL, LDL, fasting plasma insulin and HOMA-IR levels were higher in males with metabolic syndrome compared to those without metabolic syndrome and there was a statistically significant difference between fasting blood glucose, cholesterol, TG: HDL ratio and HOMA-IR levels ( $p<0.05$ ). 15.4% of adolescents with metabolic syndrome and 21.4% of those without metabolic syndrome had physical activity ( $p<0.05$ ). Improving nutrition and physical activity habits may be effective in preventing the development of the metabolic syndrome. There is a need for interventions to reduce risk factors for healthy growth and development in Turkish adolescents

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