

### PREVALENCE OF UNDERWEIGHT, OVERWEIGHT AND OBESITY AMONG PRESCHOOL CHILDREN IN ANKARA, TURKEY AND ASSOCIATED SOCIO-ECONOMIC FACTORS

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The aim of the present study is to assess the prevalence of underweight, overweight and obesity among preschool children and to analyse factors contributing to this phenomenon. The study group consisted of 270 children (135 boys and 135 girls) aged 3–5 years, whose parents gave consent to include them in the study. Weight, height were recorded according to the standard protocols and, underweight, overweight and obesity were classified using BMI according to WHO criteria. Socio-economic status (SES) was determined using education level and occupation of parents. Developmental multiple domains, motor, concept, linguistics developmental levels were measured and a standard of development index were also taken into account. Younger children's development level was assessed with Developmental Indicators for the Assessment of Learning™, Fourth Edition (DIAL™-4). It was developed by Mardell and Goldenberg (1998) and adapted by Aral et. al. (2014) to Turkish culture and was utilized as data collection tools. Data indicated that younger children (3 and 4 years old) had sexual dimorphism, girls had significantly lower mean weight-for-age ( $p < 0.01$ ) and height-for-age ( $p < 0.01$ ). According to the mean z-scores of BMI, 1.1% of children were diagnosed as underweight (1.2% at age 3, 1.9% at age 4, no at age 5), 3.6% overweight (3.6% at age 3, 2.1% at age 4 and 3.9% at age 5) and 1.2% obese (1.2% at age 3, 0.9% at age 4 and 2.6% at age 5). Tendency of being overweight and obese was prominent in boys, prevalence gradually increased with age, where stunted girls were evident at younger ages. Development index, SES, weight and height factors were highly associated ( $p < 0.01$ ), and ANOVA results revealed better anthropometric status with better family background. It is suggested that the growth level of these more advantaged peers may have a positive impact of changing environmental conditions among preschool children in Turkish population.

**Key words:** *preschool children, growth, underweight, overweight, obesity, Turkey*

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### CONSTITUTIONAL CHARACTERISTICS OF BIOLOGICAL MATURATION PROCESS IN ONTOGENESIS

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The rate of biological maturation may have a genetic nature, associated with a certain type of constitution (Nikityuk, 2000). Longitudinal study of 210 boys and 159 girls was conducted for 4 years (ages 3 to 6) and of 66 boys and 59 girls for 10 years (ages 7 to 17). Biological age of the examined subjects was estimated from 3 to 9 years with the somatic criterion (Philippine test), from 5 to 14 years with odontological criterion, and from 9 to 17 years by the development of secondary sexual characteristics. Somatotypes of all children were assessed according to the Shtefko-Ostrovsky method (1929) with the 4 selected types: asthenic (A), thoracic (T), muscle (M) and digestive (D). In the first childhood constitutional differences in biological maturity were expressed as trends likely due to insufficient differentiation of somatotypes at this stage. In the second