

TISTICA 10.0. The descriptive analysis, ANOVA and alternative analysis (Z-score) were used. The results of analysis showed significant differences in accumulation of SAT and VAT between groups of children with different nutritional status. The children with normal nutritional status were characterized by non-significant below average values (Z-score) for SAT, VAT and VAT/SAT-ratio for their age and gender. In contrast, the groups of children with overweight and obesity were characterized by above average values for SAT and VAT ($p < 0.05$). The values VAT/SAT-ratio is below average for age and gender. With age the quantity of SAT and VAT in both sexes increase. Overall, the boys accumulate greater quantity of VAT in all period, and of SAT after 14 years. The differences between age, sex and territorial groups in quantity of SAT and VAT and their ratio were found.

Key words: *subcutaneous adipose tissue (SAT), visceral adipose tissue (VAT), VAT/SAT-ratio, body nutritional status, adolescents, Bulgaria*

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EVALUATION OF ARM ANTHROPOMETRY AND NUTRITION IN TURKISH PRESCHOOL CHILDREN

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Arm anthropometry – cross-sectional analyse of arm muscle area and arm fat area- has been used as a proxy of body composition in both clinical and field research and proposed to be an indicator of nutritional status. Present study aimed to evaluate nutritional status of preschool children aged 3-5 years old using arm anthropometry. The survey was conducted in Ankara, the capital city of Turkey, on 270 children (135 boys and 135 girls) from private and public preschools, whose parents gave consent to include their children in the study. Anthropometric measurements of mid-upper arm circumference (MUAC) and triceps skinfold were taken using standard technique and instruments, and arm muscle area (AMA) and arm fat area (AFA) were calculated. The results show that age differences in AMA between ages 3 and 4 were found to be statistically significant ($p < 0.05$). Furthermore, gradual increase in AMA in boys with age was prominent, and in AFA in girls, respectively. Thus, muscle development was clear in favour of boys and fat development - of girls. Anthropometrical studies, particularly, those of arm anthropometry on preschool children in Turkey are very limited, we think that the present study will provide a contribution to this area.

Key words: *nutrition, arm anthropometry, arm muscle area, arm fat area, preschool children, Turkey*

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