

# 22<sup>nd</sup> European Nutritional Science Congress

November 26-27, 2018 | Barcelona, Spain

## Assessment of energy and macronutrients intake of children attending kindergartens in Kosovo

Agim Rysha<sup>1</sup>, Gjergji T<sup>2</sup> and Ploeger A<sup>3</sup>

<sup>1</sup>Haxhi Zeka University, Kosovo

<sup>2</sup>University of Prishtina, Kosovo

<sup>3</sup>Kassel University, Germany

**Statement of the Problem:** A balanced diet and knowledge of children's intake of energy and macronutrients is important for normal growth as well as for nutritional interventions to prevent childhood malnutrition. Understanding preschool children's food consumption in kindergartens of Kosovo may be one possibility to find out whether Kosovo preschool children's energy is adequate. This work aimed to observe the menu designs and to evaluate for the first times the macronutrient intake by children attending public and private kindergartens of Kosovo for a full day programme of 8 hours.

**Methodology:** Preschool children (n=469) aged 4<7 years from kindergartens in Kosovo have participated in a dietary intake assessment through weighted dietary record method. The program PRODI and SPSS version 17 were used for calculation and comparison of nutrient values with dietary reference values. The one way analysis of variance (ANOVA) was used for determination of differences between the mean intake values according to age and gender and according to public and private kindergartens.

**Findings:** The total energy intake derived from carbohydrates, fat and protein was approximately the same for 1<4 and 4<7 years old children: carbohydrates 58%; fat 27% and proteins 15%. The mean energy intake values covered between 36% and 79% of the recommended daily intake. The consumption of amino acids is higher than that required for preschool aged children and the mean percentage of energy derived from Monounsaturated Fatty Acids (MUFA) and Polyunsaturated Fatty Acids (PUFA) was not more than 35% of Reference Daily Intake (RDI). The total fiber intake covered between 30% and 46% of RDI.

**Conclusion & Significance:** Meals that are served in kindergartens are not nutrient balanced and children when at kindergartens in Kosovo consume more foods with high energy density and less high-fiber foods.

### Recent Publications:

1. Mendez R and Grissom M (2013) Disorders of childhood growth and development childhood obesity. *FP Essent* 410:20–24.
2. Hebestreit A, Bornhorst C, Pala V, Barba G, Eiben G, Veidebaum T, Hadjigergiou C, Molnár D, Claessens M, Fernández Alvira J M, et al. (2014) Dietary energy density in young children across Europe. *International Journal of Obesity* 38:S124–S134.
3. Agim Rysha, Gjergji T M and Ploeger A (2017) Dietary habits and food intake frequency of preschool children. *Nutrition & Food Science* 47(4):534-542.
4. Johnson L, Mander A P, Jones L R, Emmett P M and Jebb S A (2008) Energy-dense, low-fiber, high-fat dietary pattern is associated with increased fatness in childhood. *American Journal of Clinical Nutrition* 87:836-54.

### Biography

Agim Rysha has completed his PhD at Kassel University in Germany. Currently, he works as an Assistant Professor at the Department of Food Technology, Haxhi Zeka University, Kosovo. He did his research in Food Technology and Nutrition Sciences. Their most recent publication is in dietary habits and food frequency intake of preschool children.

agimrysha@hotmail.com