

Abstract

# Exposure to Dietary Salt through Nutrition in Public Preschools in Belgrade <sup>†</sup>

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**Abstract:** Background: Widespread overconsumption of food high in salt is linked to various adverse health conditions. Children are especially susceptible and exposed to these nutritional trends. Nutrition within preschool facilities is an important influence in adopting healthy dietary habits at an early age. Belgrade public preschools provide daily meals for around 50,000 children. As they are of recognized importance, nutritional requirements for preschools in Serbia are set out by regulations. The Institute of Public Health of Belgrade conducts continuous surveillance of nutrition in public preschools in Belgrade. Objective: To gain insight in to an important aspect of nutrition, i.e., the food served in public preschools in Belgrade. Method: Analysis of data, i.e., results of chemical–bromatological analysis of meals sampled in public preschools in Belgrade from 31 January 2018 to 31 December 2022. Statistical analysis was conducted using IBM SPSS 22.0. Results: Overall, 3917 whole day meals (comprising breakfast, lunch and snack) were analyzed for salt content (NaCl). Meal samples were taken from two age groups—1 to 3 years ( $n = 1351$ ) and 4 to 7 ( $n = 2566$ ). The findings of the study show that the average salt content across the observed period exceeded the upper values set by the regulation in both age groups— $3.57 \pm 1.17$  g in the 1-to-3-years age group and  $4.54 \pm 1.12$  g in the 4-to-7-years age group. Less than 5% of tested samples had a salt content within the defined limits (around 4.9% in both age groups). Seasonal variations in salt content in meals have been determined as well as significant statistical differences between the years of the observed period. Discussion: A positive trend is observed in terms of a gradual, discrete reduction in salt in preschool meals throughout the observed period. As joint efforts at the local level show moderate improvements, further actions are needed with the inclusion of other stakeholders (state authorities, industry, etc.) with the aim of providing the healthiest diet for children attending preschools.



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