REVIEW

from a foreign scientific adviser on the dissertation work of Abdrakhmanova Shynar Zinonovna, doctorate student, on the theme "The impact of malnutrition on anthropometric indicators of primary school children", presented for the degree of Doctor of Philosophy (Ph.D.) in the educational program 8D10101 – "Public health"

Thesis by Abdrakhmanova Sh.Z. on the theme "The impact of malnutrition on anthropometric indicators of primary school children" is devoted to a crucial public health issue of prevention, monitoring and control for child malnutrition in Kazakhstan. Abdrakhmanova S.Z. is a Principal Investigator, main executor and methodologist of the World Health Organization Childhood Obesity Surveillance Initiative (COSI) in the Republic of Kazakhstan.

Shynar's dissertation work adopt and use of a common methodology across participating countries that resulted in a surveillance system which provides regular, reliable, and valid data on children's weight status and related information in the region. The collection and analysis of the thesis data, supplemented by contextual data on home environments, enables to use the results for intercountry comparisons and monitoring of overweight and obesity in primary school-age children in the WHO European Region in order to inform appropriate and effective policy responses.

The scientific novelty of this dissertation lies in several findings that address the multifaceted issue of malnutrition among primary school children in Kazakhstan. Shynar Abdrakhmanova's thesis highlights the prevalence of overweight, obesity, thinness, and stunting among children aged 7-10 years old, with detailed analysis by gender and area of residence, covering data trend from 2020 to 2022. This work also uniquely identifies specific risk factors for malnutrition among primary school children, including breastfeeding, dietary habits and nutritional content, food insecurity, maternal overweight and family factors. Additionally, the dissertation establishes the relationship between the energy and nutritional value of children's diets and their anthropometric measurements, providing new insights into how nutrition impacts physical development in young children.

The practical significance of the dissertation research outcomes are based on providing a comprehensive framework to address both undernutrition and overnutrition among school children in Kazakhstan, thereby contributing to more effective public health interventions, including designing targeted educational programs and nutritional guidelines aimed at both children and their families.

I am convinced that Shynar has all the necessary qualities of a scientist in the field of public health in Kazakhstan. The Shynar's dissertation work examined the complex issue of malnutrition among primary school children in Kazakhstan, offering insights for further research and effective policymaking in childhood obesity and undernutrition prevention. This thesis is a remarkable accomplishment, demonstrating both strong scientific methodology and relevance to address public health challenges.

I therefore recommend the Abdrakhmanova Shynar's dissertation for official defense at the Dissertation Council for the degree of Doctor of Philosophy (PhD) in Public Health.

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