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Strengthening Nutrition in Schools in Europe and Central Asia

Assessment of school nutrition environments in the Republic of Moldova

Summary

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MINISTERUL EDUCAȚIEI ȘI CERCETĂRII AL REPUBLICII MOLDOVA

MINISTERUL SĂNĂTĂȚII AL REPUBLICII MOLDOVA

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GLOBE GLOBAL CENTRE FOR PREVENTIVE HEALTH AND NUTRITION

INSTITUTE FOR HEALTH TRANSFORMATION

DEAKIN UNIVERSITY

Swiss TPH Swiss Tropical and Public Health Institute

RED CRED MOLDOVA

List of abbreviations

EU - European Union

UNICEF - United Nations Children's Fund

ECARO - UNICEF Regional Office for Europe and Central Asia

WHO - World Health Organization

GD - Government Decision

MoER - Ministry of Education and Research

MoH - Ministry of Health

SUMP - State University of Medicine and Pharmacy "Nicolae Testemitanu"

NAPH - National Agency for Public Health

NFSA - National Food Safety Agency

LPA - Local Public Authority

NCDs - Noncommunicable diseases

MDL - Moldavian lei (official currency)

HBSC - Health Behaviour in School-aged Children

COSI - Childhood Obesity Surveillance Initiative

NEAT-S - Nutrition Environment Assessment Toolkit for Schools

Summary

The increasing burden of noncommunicable diseases associated with unhealthy diets represents a major challenge for public health at global and national levels. The Republic of Moldova faces a double nutritional burden, 20% of 7-year-old children are overweight and 7% obese (WHO COSI 2024).

The present study aimed to assess the nutritional environment in 43 educational institutions (17 early childhood education institutions and 26 primary schools) from the Republic of Moldova, using the Nutrition Environment Assessment Toolkit for Schools (NEAT-S) developed by UNICEF Regional Office for Europe and Central Asia and Deakin University (Australia), focused on four domains: nutritious foods, healthy food and physical activity environments, nutrition services, and nutrition education. A nationally representative sample size of 729 respondents was selected from 26 primary schools, specifically 9-10-year-old students, 4th-grade in the 2025–2026 academic year to assess the attitudes and perceptions of schoolchildren regarding nutritional food and conditions for physical activity environment

The results of this study in the Republic of Moldova demonstrate that nutrition education is on the agenda of public authorities, being addressed in policy documents and present in the curricula in the majority (over 90%) of educational institutions, but the study emphasizes the need for an integrated and multisectoral public policy approach to strengthen the school nutritional environment in the Republic of Moldova.

Introduction

Background

The Republic of Moldova is a landlocked country located in the northeastern part of the Balkan region of Europe, between the Dniester and Prut rivers. According to the 2024 Population and Housing Census, the current resident population is 2,409,200, of which 47.2% are men and 52.8% women.

Following its application for EU membership in March 2022 and its attainment of candidate country status in June 2022, Moldova has committed to aligning its national legislation with European law and aims to become a member state of the European Union by 2030. The educational system in Moldova is structured into levels and cycles in accordance with international standards: Early education (kindergarten); Primary education (grades 1-4); Secondary education (Gymnasium – grades 5–9 and Lyceum – grades 10–12). According to the National Bureau of Statistics, in 2024, there were 1,469 early childhood education institutions operating in the country (76.2% in rural areas) with 127,200 children enrolled. In primary and general secondary education was provided in 1,185 institutions (73.6% in rural areas) with 335,100 pupils enrolled.

Republic of Moldova faces an increasing burden of unhealthy weight, with 64% of adults classified as overweight and 23% as obese (WHO, STEPS 2021), 16% of adolescents are overweight and 4% obese (WHO HBSC 2022), 20% of 7-year-old children are overweight and 7% were obese (WHO COSI 2024).

In recent years, several regulations and laws have been adopted to combat unhealthy eating, such as, the regulation on food labelling (GD no. 84/2024), the sanitary regulation setting the maximum allowable content of trans fats in processed food products (GD no. 120/2023), and the regulation on salt content in bakery products (GD no. 596/2011).

The authorities have defined a list of prohibited and recommended food products for a healthy diet, established principles for daily menu planning, and set guidelines for the organization and assurance of children's nutritional health in general education institutions (Joint Order of the Ministry of Health and the Ministry of Education and Research no. 488/834 of 2025). They also regulated the organization and distribution of food products for children and students in public educational institutions (GD no. 722/2018). Starting with this school year (2025-2026), all children in primary and lower secondary education (grades I–IX) benefit from free meals (GD no. 80/2025), with the option to provide packed meals for students in grades V–IX (Joint Order of the Ministry of Health and the Ministry of Education and Research no. 961/549 of 2025).

Priorities related to nutritional health, physical activity, and marketing practices of unhealthy food products targeting children and adolescents are reflected in the National Program for the Prevention and Control of Priority Noncommunicable Diseases in the Republic of Moldova for the years 2023-2027, approved by GD no. 129/2023.

To ensure new legislative interventions that would adjust existing policies regarding the provision of balanced meals and adequate physical activity for children and adolescents in educational institutions, up-to-date statistical data reflecting the current reality are needed. These will serve as strong arguments in advocating for the implementation of such policies.

Study Aims

The aim of this study is to assess the policies, interventions, and nutrition programmes for early childhood and primary education institutions, and to develop recommendations for healthy eating.

The results will support the MoH and the MoER in evaluating the implementation of the national school meals program and in identifying opportunities to strengthen efforts that promote the health and well-being of all children.

Methodology

The study is cross-sectional and includes early childhood education and general education institutions, primary-level schools randomly selected within a nationally representative sample. The standardized questionnaire Nutrition Environment Assessment Toolkit for Schools (NEAT-s), developed Deakin University by and UNICEF ECARO was used, adapted for the Republic of Moldova during the workshop (June 18, 2025, MoER Order no. 898 / 2025), approved by the Research Ethics Committee of the State University of Medicine and Pharmacy "Nicolae Testemițanu" (June 2025).

The field assessment was carried out between October 6 and 31, 2025, in educational institutions approved by the MoER (Order no. 1558 / 2025), on the sample of 43 institutions: 17 early childhood education and 26 primary schools.

Sample	43 institutions: 17 early childhood education + 26 primary schools
Student Survey	729 students (grade 4, age 9-10) from 26 schools; 369 girls (50.6%), 360 boys (49.4%)
Urban/Rural	23 urban institutions, 20 rural institutions across 10 administrative units

The study involved interviews with educational institutions administrators and direct observation of the food environment, and surveys completed by 4th-grade students from the randomly selected educational institutions across the country. Responses were recorded electronically using ODK on a tablet.

Results

CORE INDICATORS

Following the NEAT-S methodology, the assessment focused on four domains (Box 2): 1) availability of nutritious foods in educational institutions (schools and early childhood development); 2) healthy food and physical activity environments in educational institutions; 3) nutrition services in schools and early childhood development; and 4) integration of nutrition

education into general institutions' curricula (Chapter I), as well as evaluation of students' attitudes and perceptions regarding their school nutrition environment (Chapter II).

Findings highlights

Nutritious food: even though 100% of institutions (26 schools and 17 early childhood development) offered meals or snacks, the proportion of institutions that made them exclusively healthy, consisting of fruits, vegetables, wholegrains, and dairy with no addition of salty packaged foods, deep fried foods or sugar sweetened or artificially sweetened drinks, was 67% (n=29). Only half of the institutions (53%) provided meals or snacks made by local food suppliers.

Healthy school food and physical activity environments: out of 42% of schools (n=11) that sell food and drinks, 64% (n=7) didn't sell sweet or artificially sweetened beverages, and none of them sold sweet, salty or deep-fried foods. Many schools (81%, n=21) allowed students to purchase food and drinks from outside school grounds during school hours. Notably, all early childhood development institutions (n=17) are free from visible unhealthy food and drink options outside institution's grounds. However, only 69% of schools (n=18) were free from unhealthy food and drink options readily available in surrounding areas.

Nutrition services: only 37% of institutions (n=16) reported having a formal programme to refer children identified as being at risk of malnourishment to health services.

Nutrition education: all the institutions (n=43) delivered nutrition education according to the national curricula for early childhood development and primary school institutions.

Students' attitudes and perceptions: Chapter II reflects student perceptions about the school nutrition and physical activity environment and their attitudes about actions to improve the school nutrition and physical activity environment. Most students - 81% - consider school meals healthy and nutritious, and 87.6% report nutrition education at school. However, only 29.9% believe they can purchase healthy foods at school. The external food environment is perceived as unfavourable, with 51,6% reporting exposure to food and drink advertising around schools and 52.6% indicating that nearby selling points of unhealthy products compromise healthy eating. Students express strong support for improvement measures, including free meals for all children (92.7%), affordable healthy foods for purchase at school (84.1%), daily physical activity for all students (83.2%), and strengthened nutrition education (88%), while support for food-marketing restrictions is more moderate, particularly regarding company-sponsored promotional materials (38.3%).

CHAPTER I. Assessment of the food and physical activity environment in early childhood development and school institutions

Domain 1. Nutritious food in institutions

All participating educational institutions provide meals or snacks to children (100%, n = 43), reported compliance with all regulatory provisions concerning healthy eating in educational settings. Educational institutions benefit from several types of programs aimed at ensuring children's access to food and the most common program was breakfast for all children, implemented in 73.1% of institutions. Funding food programs in early childhood and primary education institutions is shared among the central government (42.4%), local public authorities (31.7% from local authorities, and families (24.7%). The monthly authorities' allowance per child ranges from 17 to 33 MDL.

Most institutions (83.7%) have not yet implemented procedures for preventing food waste and (88.4%) believe that a dedicated guide for preventing food waste and recycling food packaging would be beneficial.

Indicator	Result
Institutions providing a meal or snack	**100% (43)**
Institutions providing ONLY healthy meals/snacks (no sweetened drinks, fried foods, etc.)	**67% (29)**
Institutions sourcing food from local suppliers	**53% (23)**
Institutions with adequate food safety infrastructure	**88% (38)**
Institutions preparing food on-site using iodized salt	**100% (40)**

Domain 2. Healthy food and physical activity environments

Most educational institutions (67.4%) report adherence to a healthy food environment policy and 95.3% declared full compliance with the regulatory framework regarding physical activity environments. Although, students can purchase food outside the school premises during school programs reveal 80.8% of the participating institutions.

Indicator	Result
Schools selling food/drinks on assessment day	**42% (11)**
Of those, schools NOT selling sweetened beverages	**64% (7)**
Of those, schools selling sweet/salty/fried foods	**100% (11)**
Schools allowing purchase outside school grounds	**81% (21)**

Schools free from visible unhealthy food outside grounds	**69% (18)**
Early childhood institutions free from visible unhealthy food outside grounds	**100% (17)**
Institutions with safe drinking water (regularly assessed)	**98% (42)**
Institutions free from unhealthy food marketing/sponsorship	**98% (42)**
Institutions with sufficient physical activity space & equipment	**77% (33)**
Institutions with a kitchen garden	**9% (4)**

Domain 3. Nutrition services in educational institutions

Just 37% of institutions report that the referral of malnourished or other nutrition status of children is part of a formal program, thereby ensuring proper monitoring and intervention. The majority (95.3%) of the institutions participating in the survey believe that having a dedicated guide for managing the nutrition of children with food allergies and intolerances would be highly beneficial.

Indicator	Result
Institutions with formal referral program for malnourished children	**37% (16)**
Institutions with informal/case-by-case referrals only	**51% (22)**
Institutions with no referral program or procedures	**12% (5)**

Domain 4. Nutrition education in early childhood development and school

Nutritional education is delivered in all institutions by a variety of teaching staff and specialists. Primarily, the responsibility lies with medical staff and health workers, who are present in 35 institutions (81.4%), as well as with primary school teachers or class supervisors/tutors, involved in 24 schools (92,3%). Among other specialists delivering nutrition-related information to children are early childhood development teachers (88,2%) from 17 pre-schools.

Indicator	Result
Institutions delivering nutrition education (in curriculum)	**100% (43)**
Institutions offering parent/community nutrition education (annually)	**97.7% (42)**
Time allocated per week: less than 30 minutes	**23.3% (10)**

Time allocated per week: 30 min to 1 hour	**25.6% (11)**
Institutions organizing physical activity for all grades	**100% (43)**
Preschoolers with ≥120 min/week physical activity	**16 of 17**
Primary students with ≥120 min/week physical activity	**22 of 26**

CHAPTER II. student perceptions and attitudes survey

A. Perceptions about school nutrition and physical activity environment

At a general level, most students have a positive perception of the quality of the food offered in school. Urban students reported greater exposure to food marketing near schools (48.4% vs 18.4% rural).

Indicator	Result
Perceive school food as healthy and nutritious	**81.0%**
Believe they can buy healthy food at school	**29.9%**
Report access to safe drinking water at school always	**80.4%**
Perceive school gives opportunities to play sport	**92.0%**
Report learning about healthy eating at school	**87.6%**
Use a kitchen garden at school	**4.1%**
Perceive exposure to food/drink advertising near school	**34.6%**

Rural students reported more positive perceptions of physical activity space. Over 56% of students disagreed that they could buy healthy food at school, with urban students most dissatisfied.

Indicator	Result
Support free meals for all children	**92.7%**
Support strengthening nutrition education	**88.0%**
Support ensuring healthy meals in school	**89.5%**
Support affordable healthy food for purchase	**84.1%**
Support daily physical activity for all	**83.2%**
Support banning unhealthy food marketing around school	**56.8%**
Support banning unhealthy food marketing inside school	**50.2%**
Support banning company equipment sponsorship at school	**38.3%**

Implications and Recommendations

The current assessment highlights important insights and opportunities to improve the school nutrition environment in the Republic of Moldova.

1. Strengthen Nutritional Quality of School Meals

While 100% of institutions provide meals, only 67% offer exclusively healthy options. Sweetened beverages were present in 32.6% of meals assessed.

- Strengthen national nutrition standards for school meals to restrict sweetened beverages and foods high in sugar, salt, and fat.

2. Improve Local Sourcing, Food Waste and Recycling

Only about 53% of institutions sourced food locally, despite national guidance encouraging this. Gaps exist in food waste, recycling, and allergy management guidance.

- Enhance collaboration with local producers through small contracts or tenders.
- Develop national guidelines on food waste prevention and food packaging recycling.
- Create a national guideline on nutrition for students with food intolerances or allergies.

3. Enforce Restrictions on Unhealthy Food Sales in Schools

All 11 schools with food sales offered unhealthy items on assessment day; no healthy food was available for purchase. This contradicts existing national legislation.

- Monitor and enforce compliance with restrictions on the sale of unhealthy products in educational institutions.
- Mandate inclusion of healthy foods (fruits, vegetables) at school sales points with pricing policies that make healthy options more affordable.

4. Regulate the Commercial Environment Around Schools

About 18.6% of schools had visible unhealthy food sales outside their grounds (as close as 5 metres). In 81% of schools allow students to buy food outside during school hours.

- Collaborate with local public authorities to monitor unhealthy food sales near schools.
- Regulate food marketing and sales in the vicinity of educational institutions, especially in urban areas.
- Implement educational campaigns on how food marketing influences children's health.

5. Strengthen and Expand Nutrition Education

Nutrition education exists in all institutions but varies greatly in quality, time, and delivery. Very few schools have kitchen gardens. There is no dedicated teacher in 83.7% of schools.

- Expand teacher training in nutrition education and ensure accuracy and consistency of messages.
- Increase time allocated to nutrition education; establish a minimum number of hours at all education levels.
- Integrate practical learning components such as school gardens.

6. Institutionalize Referral Mechanisms for Nutritional Issues

Only 37% of institutions have a formal referral program; most rely on informal approaches.

- Develop a formal system for referring students with malnutrition to primary healthcare services.
- Establish a unified national nutritional surveillance system incorporating cases identified in schools.

7. Maintain and Expand Physical Activity

Physical activity declines at higher grade levels: 16 of 17 early childhood institutions meet WHO targets, but only 15 of 24 high schools do.

- Maintain and diversify daily physical activity opportunities for all students, especially at higher education levels.

8. Strengthen Monitoring and Enforcement

Existing monitoring systems need to be expanded to track compliance with nutritional standards, local procurement, food waste, and marketing restrictions.

- Integrate NEAT-S indicators into national information systems and develop enforcement mechanisms.

Implementation: Success Factors and Lessons

The NEAT-S assessment was implemented within a short timeframe due to strong institutional support from UNICEF Moldova, Deakin University, MoER, and MoH. Clear sampling strategies, continuous communication with schools, and designated focal points supported data collection efficiency. The NEAT-S tools were adapted through a participatory June 2025 workshop with national and international stakeholders.

Key lessons include: the need for adequate time for student questionnaire administration (some concepts were challenging for 10-year-olds); that geographic coverage in Moldova is feasible within limited field visits; and that variability in policy implementation across schools underlines the need for continued local-level guidance and capacity building.

Strengths, limitations and future research

Strengths

- Strong collaboration among research team, MoER, MoH, and institutions.
- Tools adapted to national context with stakeholder involvement.
- Combination of objective measures (direct observation) and subjective data (questionnaires).
- Comprehensive four-domain framework covering food availability, environment, services, and education.
- Nationally representative sample across urban/rural areas and all development regions.

Limitations

- Short timeframe for approval, adaptation, and implementation of the toolkit.
- Some student responses may reflect personal perceptions or misunderstandings due to age.
- NEAT-S is a cross-sectional tool; it does not determine causal effects without longitudinal design.

Future research

- Assessment of marketing of unhealthy food products in the immediate proximity of educational institutions;
- Food intolerances or allergies management;
- Food waste prevention and food packaging recycling; Population literacy on healthy nutrition and physical activity.
- Nutrition policies impact assessments

Conclusions

- This assessment of nutrition environments in Moldovan early childhood and primary education institutions reveals both important strengths and significant challenges. Key strengths include strong stakeholder collaboration, adapted assessment tools, and universal provision of school meals and nutrition education.

- Key challenges include inconsistent nutritional quality of meals (sweetened beverages, high-sugar/salt foods still present); weak enforcement of food sales restrictions; easy student access to unhealthy foods inside and around schools; limited practical nutrition education and school gardens; lack of formal referral systems for nutritional concerns; and declining physical activity at higher grade levels.

- Addressing these gaps requires a comprehensive, multisectoral approach. Priorities include strengthening school meal programs; developing national guidelines on local procurement, food waste, and allergy management; enforcing restrictions on unhealthy food sales and marketing in and around schools; expanding and improving nutrition education; institutionalizing referral pathways; and integrating monitoring indicators into national information systems. Transforming Moldova's educational environment into a key tool for health promotion will contribute to achieving national and global nutrition and health goals by 2030.

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