



Food Insecurity and Children's Rights to Adequate Nutrition in Europe

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Advocating for European children's rights to health and well-being has characterized the wide spectrum of efforts of the European Pediatric Association-Union of National European Pediatric Societies and Associations (EPA/UNEPSA) since its founding in 1976. These activities aim to intensify the learning processes of child health care service systems across European borders. Food security has been defined as a situation in which all community residents can obtain a safe, culturally acceptable, nutritionally adequate diet through a sustainable food system that maximizes self-reliance and social justice.¹ Food insecurity, which refers to a lack of food access based on financial and other resources, is a never-ending issue impacting especially the health of young individuals and their development. Inadequate nutrition negatively influences children's well-being by hampering the accomplishment of their complete physical, mental, and social comfort. The aim of this commentary is to raise pediatricians' awareness on the emerging issue of children's food insecurity and its risks in Europe.

Definition of Food Insecurity and Its Prevalence in Europe

The broad-based and accepted definition of household food insecurity is the limited or uncertain availability of nutritionally adequate and safe food, or having to acquire foods in socially unacceptable ways.² Conditions strictly related to food insecurity include hunger, undernutrition, overnutrition with low-quality food, and a disordered intake of macronutrients and micronutrients (malnutrition), as well as physical harms (chronic disease) and psychological harms (personal, family, and social disturbances).³

The prevalence of food insecurity has increased during recent years in several European countries.⁴ To measure moderate to severe food insecurity in different global areas, a 2017 study performed by the United Nations Children's Fund (UNICEF) used the Food Insecurity Experience Scale indicator, an experience-based metric that reported food-related behaviors on the inability to access food owing to resource constraints.^{4,5} In the 28 European Union (EU) countries, the regional estimates of food insecurity among households with children <15 years of age showed a Food Insecurity Experience Scale

prevalence of 18% of households experiencing a moderate (4%) to severe (14%) inability to access food, and 20% prevalence of households reporting not enough money to buy food.⁶ In the European Commonwealth of Independent States identifying former parts of the Soviet Union, the same UNICEF study reported a Food Insecurity Experience Scale prevalence of 17% of households with moderate (2%) to severe (15%) inability to access food and 28% prevalence of households with an economic-related inability to buy food.

Data from the EU Commission database, Eurostat, also showed remarkable disparities in food security among countries of the union that were heterogeneous regarding their socioeconomic background.⁷ Food insecurity began to increase in the EU between 2009 and 2012, likely as a result of the 2008 global economic turmoil. Eurostat 2015 data showed a substantial variations in food insecurity across EU countries during the posteconomic crisis period that were confirmed in later reports.⁷ A high prevalence of household food insecurity, ranging from 10% to 22% and increasing, was reported for the Czech Republic, Hungary, and Slovakia. During the same period in Poland and Slovenia, the prevalence of food insecurity showed a significant (>1%) decrease, as also shown by Austria, Germany, and Portugal, where the prevalence of food insecurity ranged from 3% to 8% after a decade-long decreasing trend.⁷ However, during the same period, other European countries showed a significant increase in food insecurity, ranging from 2% to 10%, which was documented in the UK, Hungary, Greece, and Italy, where food insecurity increased from 7% to 17%.

Experiencing a low unemployment rate (<6%), well-meaning citizens in Germany established food banks and soup kitchens even in small towns. The food pantry movement has some 60 000 volunteers and about 3000 food banks—a larger network than some of the supermarket chains. The number of people receiving meals for free has approximately doubled to >1 million.

Taken together, these data suggest that food insecurity in Europe is a current severe issue impacting children's well-being

EPA/UNEPSA	European Pediatric Association-Union of National European Pediatric Societies and Associations
EU	European Union
UNICEF	United Nations Children's Fund

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in a generalized way and involving several European countries regardless of their geographical location, political background, socioeconomic status, and gross domestic product.

Malnutrition and Its Relation to the Recent Economic Turmoil and Food Insecurity in Europe

An important issue related to food insecurity is malnutrition.⁸ Significant changes in the diet of the European population have been observed during the past 3 decades. Data from the Food and Agriculture Organization of the United Nations indicated a shift toward a different dietetic regimen defined as the “Western diet,” characterized by high content of sweeteners, vegetables, and animal fat, and a low content in grains.^{8,9} The nutritional effects and general impact on the population’s health are currently unclear and under study, particularly in children. Although undernutrition and micronutrient deficiencies have declined in parallel to a general increase in household incomes, malnutrition as an indicator of nutritional disorders related to the consumption of low-quality food has become an increasing health problem in children, particularly for the implication of this condition in the development of chronic diseases, such as diabetes.

Malnutrition affected each country differently, depending primarily on its level of income at the time of the onset of the 2008 economic crises, and on how the economy of various countries reacted. For instance, in the Balkan countries, a recent multivariate analysis by the Food and Agriculture Organization Regional Office for Europe emphasized the presence of significant nutritional changes in diets, as well as a more sedentary lifestyle.¹⁰ The report correlated the changes to several socioeconomic factors and food insecurity leading to a specific nutritional profile for the countries of this geographical area, characterized by the coexistence of 3 important nutritional factors: undernutrition, micronutrient deficiency, and overnutrition (the triple burden of malnutrition).

Increasing Disparities and Inequities Influencing Food Security and European Children’s Well-Being

The essential elements of children’s health and well-being are ingrained in socioeconomic, political, environmental, and behavioral factors, and they depend on how these factors will progress, stagnate, or regress within the context of the local, regional, or global economy.¹¹ This has proven to be true for Europe when the global economic turmoil distressed the world during the past decade, producing a significant impact on national health care systems that are supposed to preside over the children’s well-being throughout Europe.¹² The impact of the crisis is still being felt, and one of its significant outcomes

has been the development of a large variation in the socioeconomic condition of the European countries that, in combination with specific local factors, has produced differences in the social status of various groups of population within the same country. Such disparities were generated by inequities in socioeconomic, cultural, political, and environmental conditions induced by the crisis. The widening of the gaps in parity and equality between the populations living in Europe, have created disparities in the health status of children that can be typically described as unfair, unjust, avoidable, and unnecessary.¹³

Food insecurity in Europe seems to be solidly rooted in inequities in social and environmental determinants of health, which followed the global economic turmoil of 2008 generating poverty, income inequality, environmental deterioration, and decline in educational and other resources. To this regard, the European countries have shown a substantial inability to produce effective public policies, collectively implemented and capable to efficiently contrast the decline in children well-being observed in various countries, and in particular food vulnerability as a condition that places vulnerable people at risk of becoming food insecure.

Conclusions

The number of children being marginalized in Europe is progressively increasing, and child poverty and other indicators of children’s well-being, like food insecurity, position Europe in the lowest rank among the world’s most industrialized nations.^{14,15}

Health care equity has been identified as a fundamental component of The EPA/UNEPSA’s strategic plan and agenda, which also focuses on factors such as food insecurity contributing to influence children’s health and well-being in addition to health care. As part of its programs and policies addressing child health disparities through practice, advocacy, education, research, and policy formulation, EPA/UNEPSA will raise awareness of pediatricians on the escalating food insecurity in several geographical areas and populations in Europe, and on their potential role in responding. In addition to their efforts in pediatric and community settings, pediatricians can serve as advocates for policies that improve access to nutritious food. Pediatricians can therefore educate their local or national decision makers about the impact of food insecurity on children’s health, education, and outcomes in relation to the life cycle model.¹⁶ Pediatricians can network with other advocates of child health to support policies that strengthen child nutrition programs. ■

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References available at www.jpeds.com

References

1. Hamm M, Bellows A. Community food security: background and future directions. *J Nutr Educ Behav* 2003;35:37-43.
2. Holben DH. Position of the American Dietetic Association: food insecurity and hunger in the United States. *J Am Diet Assoc* 2006;106:446-58.
3. Gagné MH, Drapeau S, Melançon C, Saint-Jacques MC, Lépine R. Links between parental psychological violence, other family disturbances, and children's adjustment. *Fam Process* 2007;46:523-42.
4. Loopstra R, Reeves A, Stuckler D. Rising food insecurity in Europe. *Lancet* 2015;385:2041.
5. Food and Agriculture Organization of the United Nations (FAO). The Food Insecurity Experience Scale. <http://www.fao.org/3/a-bl354e.pdf>. Accessed March 18, 2018.
6. Audrey L, Pereira L, Handa S, Holmqvist G. Prevalence and correlates of food insecurity among children across the globe. Office of Research — Innocenti Working Paper WP-2017-09 | June 2017. New York: UNICEF. 2017.
7. European Union. European commission database. EUROSTAT. <http://ec.europa.eu/eurostat/data/database>. Accessed March 18, 2018.
8. Thompson B, Cohen MJ, Meerman J. World food insecurity and malnutrition: scope, trends, causes and consequences. In: *The impact of climate change and bioenergy on nutrition*. FAO United Nations Edition and Springer Science+Business Media B.V Publisher; Dordrecht, Netherlands: 2012.
9. Pettoello-Mantovani M, Guandalini S, Ecuba P, Corvino C, di Martino L. Lactose malabsorption in children with symptomatic giardia lamblia infection: feasibility of yogurt supplementation. *J Pediatr Gastroenterol Nutr* 1989;9:295-300.
10. Capacci S, Mazzocchi M, Shankar B, Traill B. The triple burden of malnutrition in Europe and Central Asia: a multivariate analysis. FAO Regional Office for Europe and Central Asia Policy Studies on Rural Transition No. 2013-7; 2013.
11. Pettoello-Mantovani M, Campanozzi A, Maiuri L, Giardino I. Family-oriented and family-centered care in pediatrics. *Ital J Pediatr* 2009;35:Article number 12.
12. Wolfe I, Thompson M, Gill P, Tamburlini G, Blair M, van den Bruel A, et al. Health services for children in Western Europe. *Lancet* 2013;381:1224-34.
13. Krieger N. A glossary for social epidemiology. *J Epidemiol Community Health* 2001;55:693-700.
14. Food and Agriculture Organization (FAO). Report of the world food summit. Rome Food and Agriculture Organization of the United Nations; 1996. <http://www.fao.org/docrep/003/w3548e/w3548e00.htm>. Accessed March 20, 2018.
15. UNICEF Office of Research. Child well-being in rich countries: a comparative overview. Innocenti Report Card 11, UNICEF Office of Research, Florence; 2013.
16. Pettoello-Mantovani M, Ehrlich J, Romondia A, Nigri L, Pettoello-Mantovani L, Giardino I. Diversity and differences of postgraduate training in general and subspecialty pediatrics in the European Union. *J Pediatr* 2014;165:424-6, e2.