

Evaluating trends in global dietary patterns



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The work by Fumiaki Imamura and colleagues in this issue of *The Lancet Global Health*¹ is a unique attempt to evaluate measures of dietary quality and their trends in most countries worldwide. They used a wide range of data sources, including nationally representative dietary surveys, local surveys, and foods disappearance data—ie, UN Food and Agriculture balance sheets. They also adjusted for total energy intake to evaluate quality—as far as possible—independently from quantity.

Imamura and colleagues used a simple a priori method to define a favourable dietary pattern, based on ten recognised healthy items (fruit, vegetables, beans and legumes, nuts and seeds, wholegrains, milk, total polyunsaturated fatty acids, fish, plant omega-3s, and dietary fibre), and seven unhealthy items to define an unfavourable dietary pattern (unprocessed red meats, processed meats, sugar-sweetened beverages, saturated fat, trans fat, dietary cholesterol, and sodium). Such a selection is reasonable, because it includes several—although not all—of the items included in various a priori-defined dietary patterns, such as the Healthy Index 2005,² the Mediterranean Diet Score,³⁻⁶ and the Healthy Nordic Food Index,⁷ which have been shown to favourably affect total mortality and the risk of vascular, metabolic diseases, cancers, and other major chronic conditions.

However, how those measures and a priori scores—essentially based on analytical (cohort and case-control) studies within populations—can be extended to a global ecological study is unclear, because intercountry differences in dietary components essentially reflect the availability of the 17 items included in the score, rather than individual choices based on health-related indications and individual consciousness and attention. This is clearly reflected in the favourable scores for fewer unhealthy foods, concentrated in a few low-income African and Asian countries, which might be attributable to a diet poor in several aspects in those areas. Also, dietary habits might be more homogeneous in high-income countries, but substantially more heterogeneous in middle-income and low-income countries.

Likewise, the highest scores for healthy foods are in several low-income countries, as well as a few Mediterranean ones, reflecting favourable aspects of the Mediterranean diet.⁵ Whereas the low scores for healthy indices for selected central European countries

and Asian republics of the former Soviet Union (eg, Uzbekistan, Turkmenistan, and Kyrgyzstan) are easy to understand, it is more difficult to justify the fairly low scores for France or Italy, whose diets are generally deemed to be of good quality, and whose populations have some of the highest life expectancies worldwide.

In view of the large number (187) of countries included in this global analysis, it is not surprising that a few apparent inconsistencies can be identified, but this does not necessarily lessen the interest of the large amount of work included in the study. Still, the reader has to recognise that this is essentially a descriptive and ecological analysis, based on a wide range of sources, whose validity and reliability are largely heterogeneous.

Of additional interest are the analyses of changes in dietary patterns over the 20-year period considered. Such analyses are based on within-country comparisons, and are therefore less affected by the major difficulty in comparing dietary information from high-income and low-income countries.

Generally, results of the analyses indicate improvements in dietary patterns over the past two decades in several areas of the world, particularly in Russia and neighbouring countries of central and eastern Europe and Asia, but also in most of northern Europe and North America. These have been reflected in improvements in health. For instance, the wider availability of vegetable fats, vegetables, fruit, and general food variety in Poland due to democracy and the market economy in the 1990s has led to substantial and immediate declines in cardiovascular diseases in that country.⁸

Of importance, in any case, is the message that dietary patterns have been improving in several areas of the world during the past 20 years, with the possible major exceptions of China, India, and several sub-Saharan countries. At least with reference to China and India, this is not obviously reflected in the general health status of their populations, whose life expectancy has substantially increased,⁹ and which came after substantial food shortages and famine in the 1960s and 1970s.

In view of the importance of diet and nutrition on health and related societal issues, the key focus of the paper remains the need to understand the agricultural, trade, and food industry, and health policy determinants

to improve dietary patterns and nutrition in various areas, taking into account the traditional characteristics of diets worldwide.¹⁰ Additional valid information about different dietary patterns might come only from analytical (cohort and case-control) studies done in various populations. This specifically applies to several low-income countries of the world, where nutritional, epidemiological, and public health data are still scanty and inadequate. Also, information about the environmental effect of dietary patterns will be needed in the future, because food not only drives human health, but also the health of the planet.⁹

*Carlo La Vecchia, Lluís Serra Majem

Department of Clinical Sciences and Community Health, Università degli Studi di Milano, 19 Milano, Italy (CLV); and Research Institute of Biomedical and Health Sciences, University of Las Palmas de Gran Canaria, Las Palmas de Gran Canaria, Spain (LSM)
carlo.lavecchia@unimi.it

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