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Longevity: the best marker for sustainable development?

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Raising longevity in most countries is mainly due to a later arrival to “physiological” old age. Progressively in an increasing number of countries, people over 70, 80, and even 90 years old are in a much better physical and mental fitness than their contemporaries 10 years earlier. This delayed old age does not concern any more only a minority of genetically protected privileged individuals, but general population.

Among the factors of this new “longevity for all”, some are individual factors as absence of risk behaviors, as keeping mental, physical and mainly social activities after professional retirement, and absence of physical isolation and moral loneliness, optimism and resilience.

But the main evidence based factors are structural and collective. Global population longevity is linked with level of social development of the country: access to pathogen-free water and food, sewer for all, access to sufficient and varied food, vaccinations, better working conditions, end of promiscuity in homes, sufficient retirement pensions, access to an efficient primary care network, and later in evolution, gerontologic facilities as geriatrics services and teaching, home care, nursing homes.

A very strong factor of longevity, obvious in history of longevity is the educational level obtained during childhood. This factor exists as well in Africa where educational level of the mother is the best factor of longevity, as in European countries in which educated classes have a large advantage in health and in longevity on citizens with a poor educative level. Educative level is always and everywhere a stronger factor of longevity than the financial resources level.

If we study geography of longevity, following the data of World Bank, it appears strongly that longevity of a population is a simple global marker of the level of sustainable development and not the national product. Longevity is also a more pertinent marker that percentage of over 65 y old populations which varies largely following large emigration of young people or low natality levels. For instance Russia with a high percentage of old persons has a low life expectancy (63yo).

Developed industrial countries show the better longevity. However, among them the best levels of national longevity are obtained in countries with a good educational level for whole population, and resulting, a good social cohesion : Japan , Australia, Israel with a mean longevity over 80 years. United States show large discrepancies in longevity following different ethnical populations, with large differences in access to education and care.

Western and Mediterranean Europe has a good longevity level, with an advantage to Mediterranean countries in spite of lower resources, likely linked to “Mediterranean diet”. Inside these countries, large discrepancies persist between individuals following their educational levels

Emergent countries improve quickly their life expectancy. In China, South East Asia, Latin America, Iran, life expectancy has passed 70 years old. In these countries large variations exist between an urban educated middle-class, with an access to care and hygiene, which have the same longevity than western populations, and rural or suburban populations, often uneducated, with poor working

conditions and promiscuity, which remain excluded from longevity. Countries giving up their rural or suburban populations, such as India, keep a poor life expectancy (62 yo).

Africa present the larger variations, opposing Tunisia, more educated, particularly women (over 72yo) in spite of absence of economic resources and Zimbabwe (36yo) with a disappearing of state structures! The more developed African countries see a raise of life expectancy, as Ghana, Senegal, Ivory Coast, and so on. But even South Africa has a long way to go.

An important side-effect of longevity is the drop of women fertility, strongly associated with increased longevity. The same phenomenon is observed in wild animal world. When an animal population advances in age and in number due to abundant food and absence of predators, natality drops quickly to attain a new equilibrium of population. Even in Muslim countries as Iran or Tunisia, woman fertility has drop to two children by woman, as in western Sweden or France. Access of new populations to Longevity could prevent over-population of the world. The only countries with a woman fertility over 7 remain Afghanistan and Irak....

So Geography of Longevity follows geography of sustainable development. This statistical marker is precise and more faithful than National Product for measuring developmental level. A country may be rich and underdeveloped as Saoudian Arabia or South Africa. Longevity and percentage of Very Old Persons (VOP) may become a simple and comprehensive index for measuring levels of development.

OMS. Travailler ensemble pour la santé. Rapport sur la santé dans le monde 2006. Genève: OMS; 2006.

Hajem S, Moulias R. Géographie de la longévité. Cahiers de la FIAPA 2007;6:27-30.

Coumé M, Touré K, Faye A, et al. Gériatrie et gérontologie au Sénégal. Soins Gerontol 2013;100:34-37.

Moulias R, Hajem S. Longévité et développement durable. Cahiers de la FIAPA 2007;6:39 - 42.

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