

algunos de los que ya trabajaban en este campo llamativamente parecen pasar a otras situaciones.

Contribuciones de autoría

Los tres autores han concebido y redactado el artículo, han aprobado su versión final y son responsables del mismo.

Agradecimientos

A la dirección y personal responsable de los másteres en economía de la salud de la Escuela Andaluza de Salud Pública, Universidad de Málaga, Universidad Pompeu Fabra, Universidad de Castilla-La Mancha (junto al Instituto Max Weber) y Universidad de Cantabria. Al grupo de investigación SEJ-393: Economía Pública y Globalización, y a la Cátedra de Economía de la salud y Uso Racional del Medicamento de la UMA.

Financiación

Ninguna.

Conflicto de intereses

Ninguno.

Bibliografía

1. Jakovljevic M, Ogura S. Health economics at the crossroads of centuries– from the past to the future. *Front Public Health*. 2016;4:115.

2. Ammerman AS, Farrelly MA, Cavallo DN, et al. Health economics in public health. *Am J Prev Med*. 2009;36:273–5.
 3. De Vito C, Furnari G, Pavia M, et al. The role of education in improving physicians' professional use of economic evaluations of health interventions. 2009;32:249–63.

Manuel Correa^{a,b,*}, Manuel Ruiz-Adame Reina^{a,b,c} y Nuria García-Agua Soler^{b,d,e}

^a Departamento de Economía Aplicada, Facultad de Ciencias Económicas y Empresariales, Universidad de Granada, Granada, España

^b Asociación de Antiguos Alumnos del Máster en Economía de la Salud de la Universidad de Málaga (AMES), Málaga, España

^c Cuidem, S.L., Sevilla, España

^d Departamento de Farmacología y Pediatría, Facultad de Medicina, Universidad de Málaga, Málaga, España

^e Instituto de Investigación Biomédica de Málaga (IBIMA), Málaga, España

* Autor para correspondencia.

Correo electrónico: manuelcorrea@ugr.es (M. Correa).

<http://dx.doi.org/10.1016/j.gaceta.2016.12.019>
0213-9111/

© 2017 SESPAS. Publicado por Elsevier España, S.L.U. Este es un artículo Open Access bajo la licencia CC BY-NC-ND (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

The double burden of malnutrition: a threat for Peruvian childhood



La doble carga de la desnutrición: una amenaza para la niñez peruana

Mr. Editor:

The process of nutritional transition in Peru is somewhat paradoxical: an alarming number of chronic malnutrition cases coexist with a high prevalence of overweight and obesity, as reported in several studies in recent years.^{1–3} Huicho et al.⁴ recently published *Child health and nutrition in Peru within an antipoverty political agenda: a Countdown to 2015 country case study*, where they stated that the success of Peru in reducing mortality in infants and children under 5 years old was achieved thanks to the strategies implemented by the government through social and health programmes aimed to tackle malnutrition, mainly in vulnerable populations.

This “breakthrough” of Peru in terms of infant mortality and reducing malnutrition and its comorbidities is “counteracted” by the maintenance of the prevalence in childhood overweight and obesity. A study using as source of information the reports of the Peruvian Demographic and Family Health National Survey between 1996 and 2011, concluded that overweight in Peruvian children decreased both in urban and rural settings until 2005 before stabilizing in 2011.³ In recent years, there have been no epidemiological studies regarding the national prevalence of overweight, obesity, and chronic child malnutrition; therefore, we conducted an analysis of the Information System of Nutritional Status (SIEN) data between 2010 and 2015 of children under 5 years that attended healthcare facilities at a national level.⁵

The national prevalence of overweight has changed over the analysis period in a range of 6.22% to 6.84%. In 2010, the national

prevalence of overweight was 6.22%. This was followed by an annual growth and reaching its peak in 2014 with 6.84%, to decrease in 2015 to 6.24%. In the case of obesity, the prevalence oscillated between 1.52% to 2.72%, with the highest figure recorded in 2013 and the lowest in 2015. We must be watchful because a high adolescent prevalence of overweight (34%) and obesity (14%) in a Peruvian urban area had recently been reported⁶ and it is very likely that our children will continue that path. On the other hand, although the prevalence of chronic malnutrition shows a decreasing trend, this still remains at alarming percentages (range 19.44% - 23.94%) and, unquestionably, far exceeds the national rate of obesity and overweight (Fig. 1).

The overall results show the persistence of a large proportion of children with nutritional problems in Peru. This is dangerous for the benefits of reducing malnutrition because they could be lost if the prevalence of infantile overweight and obesity remains its

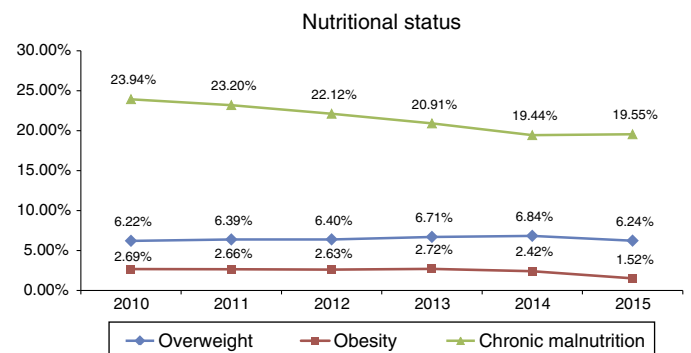


Figure 1. Prevalence of overweight, obesity and chronic malnutrition in children under 5 years, Peru 2010–2015.

frequencies or even increases them deriving in other problems, as it had happened in countries with similar epidemiological characteristics to the Peruvian.⁷ Nevertheless, some efforts have been made, such as Law 30021 for the promotion of healthy eating in children and adolescents.⁸ Under this law, nationwide surveillance mechanisms, promotion of healthy foods, and clear indications of nutritional contents in food labels were established. Still, its implementation and publication was delayed by several months,⁸ which could be revealing bureaucratic barriers and lobbies against it.

Therefore, to mitigate this risk, we need multidisciplinary participation, awareness, and involvement in the design of strategies for longitudinal policies. We also need to involve decision makers, stakeholders and academics to fight against this double burden of malnutrition, which steals the opportunities for a better future to the children from Peru.

Funding

None.

Authorship contributions

J. Smith Torres-Roman conceived the idea of the manuscript. All authors drafted the first version of the manuscript and critically reviewed its final version.

Conflicts of interest

None.

Bibliografía

1. Álvarez-Dongo D, Sánchez-Abanto J, Gómez-Guizado G, et al. Overweight and obesity: prevalence and determining social factors of overweight in the Peruvian population (2009-2010). *Rev Peru Med Exp Salud Publica*. 2012;29:303–13.
2. Urke HB, Mittelmark MB, Valdivia M. Trends in stunting and overweight in Peruvian pre-schoolers from 1991 to 2011: findings from the Demographic and Health Surveys. *Public Health Nutr*. 2014;17:2407–18.
3. de Mola CL, Quispe R, Valle GA, et al. Nutritional transition in children under five years and women of reproductive age: a 15-years trend analysis in Peru. *PLoS One*. 2014;9:e92550.
4. Huicho L, Segura ER, Huayanay-Espinoza CA, et al. Child health and nutrition in Peru within an antipoverty political agenda: a Countdown to 2015 country case study. *Lancet Glob Health*. 2016;4:e414–26.
5. Instituto Nacional de Salud. Vigilancia alimentaria y nutricional. Sistema de información del estado nutricional. (Accessed 08/09/2016.) Available at: <http://www.portal.ins.gob.pe/es/cenan/cenan-c2/vigilancia-alimentaria-y-nutricional/sistema-de-informacion-del-estado-nutricional>.
6. Lozano-Rojas G, Cabello-Morales E, Hernández-Díaz H, et al. Prevalence of overweight and obesity in adolescents from an urban district of Lima, Peru 2012. *Rev Peru Med Exp Salud Publica*. 2014;31:494–500.
7. Gupta N, Goel K, Shah P, et al. Childhood obesity in developing countries: epidemiology, determinants, and prevention. *Endocr Rev*. 2012;33:48–70.
8. Ley 30021, Ley de promoción de la alimentación saludable para niños, niñas y adolescentes. (Accessed 08/09/2016.) Available at: <http://www4.congreso.gob.pe/pvp/leyes/ley30021.pdf>.

J. Smith Torres-Roman^{a,b,*}, Diego Azañedo^c, Eloy F. Ruiz^{b,d}, José L. Avilez^{d,e}, Germán Málaga^{b,d}

^a Facultad de Medicina, Universidad Nacional San Luis Gonzaga, Ica, Perú

^b CONEVID, Unidad de Conocimiento y Evidencia, Universidad Peruana Cayetano Heredia, Lima, Perú

^c Instituto de Investigación, Universidad Católica Los Ángeles de Chimbote, Chimbote, Perú

^d Facultad de Medicina, Universidad Peruana Cayetano Heredia, Lima, Perú

^e CRONICAS, Centro de Excelencia en Enfermedades Crónicas, Universidad Peruana Cayetano Heredia, Lima, Perú

* Corresponding author.

E-mail address: jstorresroman@gmail.com (J.S. Torres-Roman).

<http://dx.doi.org/10.1016/j.gaceta.2016.09.011>
0213-9111/

© 2016 Published by Elsevier España, S.L.U. on behalf of SESPAS. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).