

Changes in the nutritional status of indigenous children under 5 years of age in Paraguay between 2008 and 2016

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Abstract

Introduction: Malnutrition is a pending challenge that has a detrimental impact on the development of indigenous children.

Objective: To describe changes in the nutritional status of indigenous children under five years of age in Paraguay between 2008 and 2016.

Materials and Methods: Cross-sectional, descriptive, analytical study, based on nationally representative data from the Survey of Indigenous Households (EHI 2008) and from the Multiple Indicator Cluster Survey (MICS 2016). The nutritional diagnosis was performed according to WHO criteria.

Results: We evaluated 268 children from the MICS 2016 survey (range 1-59 months, average age 27.1 months; 51.1% male) and 555 children from the EHI 2008 survey (range 1-59 months, average age 29.1 months; 53.9% male). The average z-scores were: weight-for-age -0.40 ± 0.90 Standard Deviations (SD) (2016) vs. -0.56 ± 1.20 SD (2008), weight-for-height 0.74 ± 0.90 SD (2016) vs. 0.64 ± 1.20 SD (2008), and height-for-age -1.57 ± 1.1 SD (2016) vs. -1.75 ± 1.6 SD (2008). The prevalence of underweight (UW), wasting (WA) and stunting (ST) decreased between 2008 and 2016: UW 9.8% (2008) vs. 4.3% (2016) ($p < 0.05$), WA 1.5% (2008) vs. 0.2% (2016) ($p < 0.10$), and ST 41.7% (2008) vs. 31.5% (2016) ($p < 0.10$). The number of children in risk of malnutrition decreased for UW and WA, and increased for ST: Table 1.

Table 1. Mean malnutrition indicators

	All		Boys		Girls		< 2 Years Old		≥ 2 Years Old	
	2008	2016	2008	2016	2008	2016	2008	2016	2008	2016
Wasting	1,5	0,2*	1,0	0,3	2,0	0,0	3,6	0,4*	0,0	0,0
In risk	5,6	2,6	5,9	3,0	5,2	2,2	8,5	4,0	3,5	1,2
Stunting	41,7	31,5*	42,0	31,9	41,4	31,0	38,1	31,1	44,3	31,8
In risk	29,4	38,5*	31,0	38,9	27,6	38,0	30,6	31,9	28,5	44,5*
Underweight	9,8	4,3*	10,1	1,6*	9,5	6,9	12,0	7,3	8,2	1,4*
In risk	25,0	16,0*	24,0	16,8*	26,1	15,3*	26,2	15,4*	24,1	16,6
Obesity	9,0	8,9	8,9	8,1	9,0	9,6	11,7	7,0	7,0	10,7
In risk	28,6	23,8	27,1	32,0	30,3	15,7*	25,7	25,5	30,6	22,2

*, * Difference was significant between 2008 and 2016: * $p < 0,05$, * $p < 0,10$ (Pearson's χ^2). Robust (linearized) standard errors in parentheses.

The prevalence of obesity remained unchanged: 9.0% (2008) vs. 8.9% (2016). Significant improvements in living conditions, especially in access to health care and basic infrastructure (both

significantly related to nutrition outcomes in 2008) have likely played a key role in the observed improvements in nutritional status.

Conclusions: Despite improvements in the nutritional status of indigenous children in Paraguay during 2008-2016, the nutritional profile remains alarming. Food and nutrition policies and interventions designed for indigenous peoples must be strengthened in accordance to food perception and cultural lifestyles of indigenous communities.

Keywords: Malnutrition; Child Health; Indigenous Population; Nutritional Status; Socio-Economic Factors; Latin America



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