

## Developmental disability in schoolchildren from four Brazilian regions

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Child developmental disability (CDD) is an emerging global health priority. More than 140 million children live with a disability in unfavorable socioeconomic conditions worldwide.<sup>1</sup>

A review including 80 papers documented a lack of high-quality research into CDD. Few of these studies were conducted in Latin America, and the only Brazilian epidemiological study was focused on hearing loss.<sup>2</sup> A review of intellectual disabilities found no prevalence studies conducted in Brazil.<sup>3</sup> Moreover, until now, no study has addressed CDD in different areas of the country. This is especially problematic in a large country such as Brazil, with great differences between regions.

Another important study on disability was carried out with 191,199 children from 18 low-income countries and demonstrated a high prevalence of disability (median: 23%; range: 3-48%), according to the Ten Question Screen (TQ). Of the 18 countries included, only three were in Latin America.<sup>1</sup> The absence of epidemiological data on CDD in Brazil is a barrier to the development of effective policies.

In the last few years, the Brazilian government has launched several programs related to CDD, but the magnitude of the problem is still unknown. Here we present data from the first study to address CDD in different geographic regions of Brazil. This cross-sectional study included a random sample of 905 children (6-9 years old) recruited from public elementary schools in four Brazilian municipalities in four different regions

(North, Northeast, Center-West, and Southeast), whose parents were interviewed face-to-face using the TQ. The TQ consists of 10 yes/no questions that screen for functional limitations in the domains of speech, cognition, hearing, vision, motor/physical impairment, and seizure disorders. This instrument is based on parent report and has been validated in several countries using a cutoff point of one or more positive items. It is applicable to children aged 2-9 years in most cultural settings, and is one of the most commonly used instruments worldwide.<sup>2,4</sup> The local Research Ethics Committee approved the project.

Using a cutoff point of one or more positive TQ items, the prevalence of child developmental disability was 38.5% (Table 1). There were no differences in rates among the studied regions ( $p = 1.9$ ).

The prevalence of CDD in our sample was higher than the median obtained in the most comprehensive international study. This rate is higher than that estimated in Jamaica (24%), similar to that found in Suriname (39%), and slightly lower than that found in Belize (44%).<sup>1</sup> It is noteworthy that the TQ is a screening tool, and no standardized procedure was carried out to confirm true disability. Nevertheless, this estimate reveals a high proportion of children who probably need special care and experience consequences associated with disabilities, such as stigmatization and lack of opportunities.

In conclusion, identification of CDD is important to help minimize obstacles to healthy child development. This is a first step to help focus government attention on the need to develop appropriate social, health, and educational programs. Given the recent growth in economic development in Brazil, the country now has more resources, and these data should guide the development of policies and the fair allocation of funds.

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**Table 1** Frequency of disabilities in children aged 6 to 9 years from four Brazilian regions (n=905)

TQ question	n	% positive
1. Developmental milestones	42	4.6
2. Vision	122	13.5
3. Hearing	50	5.6
4. Comprehension	42	4.7
5. Movement	27	3.0
6. Seizure	25	2.8
7. Learning	47	5.2
8. Speech	23	2.5
9. Speech and communication	61	6.7
10. Intellectual impairment	145	16.0
TQ+	348	38.5

TQ = Ten Question Screen.

## Disclosure

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