

Demographic dynamics and the emergency of health policies' review for the child and youth population in Brazil

Raphael Mendonça Guimarães,* Marcelo Rasga Moreira, and Nilson do Rosário Costa

Oswaldo Cruz Foundation, National School of Public Health, Brazil

Demographic dynamics are a complex phenomenon in contemporary societies. It reflects changes in population structures over time. Influenced by factors such as fertility, mortality, and migration,¹ this concept highlights demographic transitions at advanced stages in many current societies. However, uniformity does not exist globally, with some regions facing population decline due to low fertility rates and aging while others deal with rapid demographic growth and uncontrolled urbanization.² These disparities challenge traditional support structures for older adults, generate economic and social concerns, and impact health policies.

Understanding demographic trends is essential to formulating effective strategies and policies that meet the health needs of an ever-changing population. In this sense, age distribution provides valuable insights into the profile of the population and its specific demands. Traditionally, societies with a predominantly young population may need significant investments in education and employment opportunities, while those with an older population may require policies aimed at health and social assistance.³

Brazilian census data confirm this demographic change is accelerating in Brazil. More recently, data from the 2022 Census was released.⁴ One of the consequences of this phenomenon is the reduction of the young population in Brazil, which has profound and multifaceted implications for Brazilian society. In recent years, we have observed a decrease in birth rates and a progressive population aging. Regarding health policies, this change in profile has essential consequences in establishing priorities and directing financial and logistical resources in the Unified Health System (SUS).⁵

We compiled data from the Brazilian Demographic Census since 1970, organized by the Brazilian Institute of Geography and Statistics.⁶ Until 1960, the demographic census calculated the present population. From 1970 onwards, IBGE started to count the resident population.⁷ For this reason, we understand that the years after 1970 are more consistently comparable, so we present data for this period (1970–2022).

*Corresponding author.

E-mail addresses: raphael.guimaraes@fiocruz.br (R.M. Guimarães), rasga.moreira@fiocruz.br (M.R. Moreira), nilson.costa@fiocruz.br (N.R. Costa).

© 2024 The Author(s). Published by Elsevier Ltd. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Since the 1970s, there has been a rectangularization of the Brazilian age pyramid, with a shortening of the pyramid's base (ratifying relative aging) and a widening of the top (characterising absolute aging). This process is strongly associated with advances in health, reduced fertility, and increased life expectancy, balancing the population distribution between different age groups and characterizing a more uniform pyramid (Fig. 1a–f).

Regarding the population of children and adolescents, it is essential to note a consistent reduction over the decades (Fig. 2). The average decrease in the child population since the 1970s is 3.38% per decade. In 1970, children represented 29.28% of the population. In 2022, this group contributed 13.03% of the total population—a global drop of 55.5%. For teenagers, the average reduction is 1.93% per decade, going from 23.80% in 1970 to 13.81% in 2022—a drop of 41.9%. It is important to note that, since 2000, the group of adolescents is larger than the group of children.

On the one hand, this demonstrates the ongoing demographic transition unequivocally. On the other hand, it signals that the group of adolescents is beginning to demand greater attention from the childcare line, which represents a challenge for managers. Since the population aged 10–19 has its demands, we emphasize the need for a different approach for this group, different from that adopted for children, whose clinical priorities differ from those presented by adolescents.

The decrease in the young population can highlight the elderly population and boost health policies focused on the prevention and management of chronic conditions, resulting in potential savings in the long term, as prevention tends to be more efficient and economical than treating already established diseases.⁸ On the other hand, the reduction in the young population opens a window of opportunities for health policies focused on this group. By decompressing the health system with demands for this specific group, health systems can focus on organizing the supply of actions, especially health promotion in schools, prevention of diseases, and strengthening programs with nutritional education and mental health. It is crucial, given the growing challenges in young people's mental health.⁸

It is essential to highlight that investing in partnerships between schools and health services creates conducive environments for young people's growth and integral development, addressing their specific health needs. Furthermore, the retraction of the young



The Lancet Regional Health - Americas 2024;32: 100700
Published Online xxx
<https://doi.org/10.1016/j.lana.2024.100700>

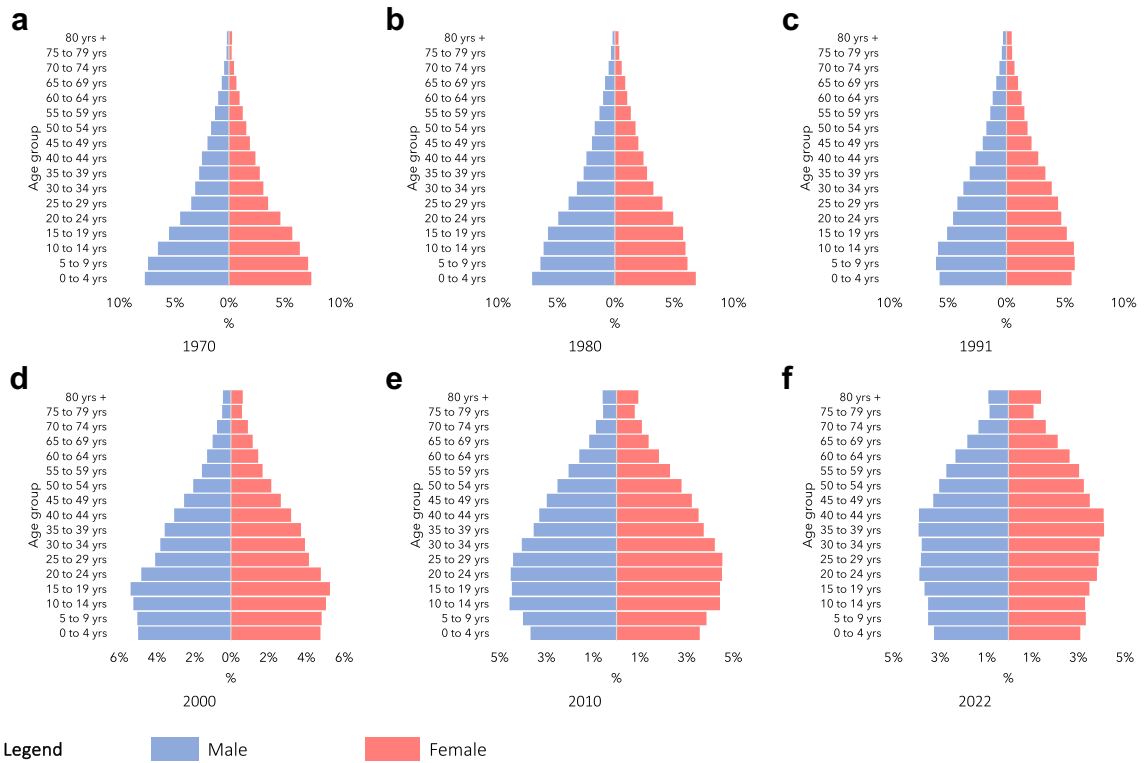


Fig. 1: Age distribution of the Brazilian population. Brazil, 1970–2022. **Source:** Brazilian National Bureau of Statistics (IBGE), 2024.

population allows for more personalized and efficient attention in paediatric care, including reorganizing the hospital network for inpatient beds. Diagnosing pent-up demand for neonatal ICU and paediatric ICU beds is not new, whether in the public or private network in Brazil.⁹ Finally, since adolescents are numerically superior to children and this trend appears irreversible,

the discussion on the organisation of the adolescent health line of care is urgent.

In summary, formulating effective public policies demands a deep understanding of population dynamics, considering not only demographic changes but also social, cultural, and economic factors. The decline in the young population is an opportunity to redirect efforts

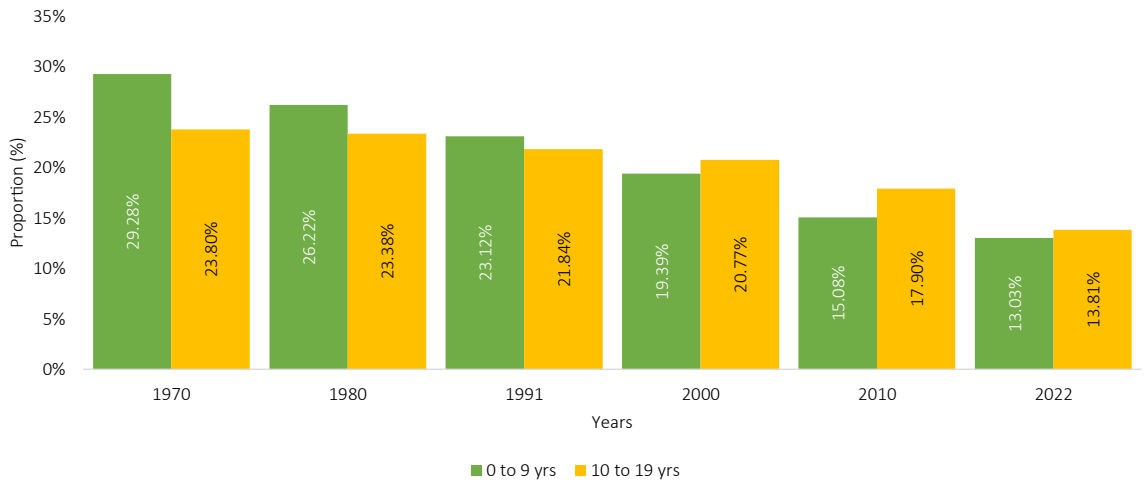


Fig. 2: Proportion of children and adolescents in Brazilian population. Brazil, 1970–2022. **Source:** Brazilian National Bureau of Statistics (IBGE), 2024.

and resources toward specific health policies for children and adolescents. It lays a solid foundation for future well-being by strategically investing in promoting health from childhood. This proactive approach not only benefits individual health but also contributes to building a healthier and more resilient society.

Contributors

All authors contributed equally in conceptualisation, visualisation and writing.

Declaration of interests

None.

Acknowledgements

None.

Funding: None.

References

- 1 Lutz W. Demographic metabolism: a predictive theory of socio-economic change. *Popul Dev Rev.* 2013;38(2):283–301.
- 2 Galor O. The demographic transition: causes and consequences. *Demography.* 2012;49(1):1–28.
- 3 Oliveira ATR, O'Neill MMVC. Cenário sociodemográfico em 2022/2030 e distribuição territorial da população. Uso e ocupação do solo. In: Cruz Fundação Oswaldo, ed. *A saúde no Brasil em 2030 - prospecção estratégica do sistema de saúde brasileiro: população e perfil sanitário (Vol. 2, pp. 41-93)*. Rio de Janeiro: Fiocruz/Ipea/Ministério da Saúde/Secretaria de Assuntos Estratégicos da Presidência da República; 2013.
- 4 IBGE. Censo demográfico. Available at: <https://agenciadenoticias.ibge.gov.br/agencia-noticias/2012-agencia-de-noticias/noticias/38186-censo-2022-numero-de-pessoas-com-65-anos-ou-mais-de-idade-cresceu-57-4-em-12-anos>; 2022. Accessed in jan 2024.
- 5 Camarano AA O novo paradigma demográfico. *Ciência Saúde Coletiva.* 2013;18(12):3446–3456.
- 6 IBGE. Panorama do censo demográfico. Available at: <https://censo2022.ibge.gov.br/>; 2022. Accessed in feb 2024.
- 7 Ribeiro JM, Ribeiro MR. An approach to suicide among adolescents and youth in Brazil. *Ciência Saúde Coletiva.* 2018;23(9):2821–2834.
- 8 Bronsard G, Alessandrini M, Fond G, et al. The prevalence of mental disorders among children and adolescents in the child welfare system: a systematic review and meta-analysis. *Medicine (Baltimore).* 2016;95(7):e2622.
- 9 Miranda ECS, Rodrigues CB, Machado LG, et al. Situação dos leitos neonatais em maternidades brasileiras: uma análise exploratória. *Ciência Saúde Coletiva.* 2021;26(3):909–918.