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Rise and fall of household food security in Brazil, 2004 to 2022

Ascensão e queda da segurança alimentar domiciliar no Brasil, 2004 a 2022

Crecimiento y decrecimiento de la seguridad alimentaria de los hogares en Brasil, de 2004 a 2022

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Hunger and food insecurity numbers were already increasing worldwide before the COVID-19 pandemic, but their numbers sharply increased in 2020 and continued to increase in 2021, during the pandemic. Up to 828 million people may have faced hunger worldwide in 2021 and about 2.3 billion people experienced moderate or severe food insecurity. In Latin America and the Caribbean, 13 million more people were facing hunger in 2021 than in 2019 and 63 million more were moderately or severely food insecure [1].

Brazil was one of the pioneers in using an experienced-based measure (the *Brazilian Food Insecurity Scale* – EBIA) for national food insecurity monitoring. The Brazilian Institute of Geography and Statistics (IBGE) provides information on food insecurity since 2004 [2,3], however, the last estimates available are from 2018. To fill the information gap on food security in Brazil during the COVID-19 pandemic, the Brazilian Research Network on Food Sovereignty and Security (Rede PENSSAN) conducted two national surveys (December 2020 and April 2022) [4]. All surveys (2004, 2013, and 2018, by IBGE; 2020 and 2022, by Rede PENSSAN) are comparable in terms of sampling design and methodology to estimate food security and levels of food insecurity. Their findings were widely spread by national media and showed the important role of the scientific community in shedding light on social problems.

Results showed an alarming regression to levels of food insecurity worse than in 2004, erasing significant improvements made from 2004 to 2013 [5]. The prevalence of severe food insecurity in Brazilian households increased from 9% to 15.5% in less than two years [4]. An estimated 33.1 million Brazilians faced hunger in early 2022, 14 million more than in the end of 2020. Figure 1 shows an acceleration in the increase in severe food insecurity, which rose by 38.1% from 2013 to 2018, 55.2% from 2018 to 2020, and 72.2% from the end of 2020 to the beginning of 2022. Since 2013, severe food insecurity increased by 269% while the proportion of food secure households decreased by 46.4%.

Public policies directly or indirectly aimed at promoting food and nutrition security in Brazil began to be dismantled in 2016, which contributed to this regression in the fight against hunger [5,6,7,8,9,10,11]. Created in 2006, the Brazilian National System of Food and Nutrition Security (SISAN) has been facing large budget cuts since 2016, similarly to many programs aimed at improving food security, such as conditional cash transfer programs and support programs to strengthen the productivity of smallholder farmers. The amount that state and municipal governments receive per student for the Brazilian National School Feeding Program (PNAE) was not adjusted since February

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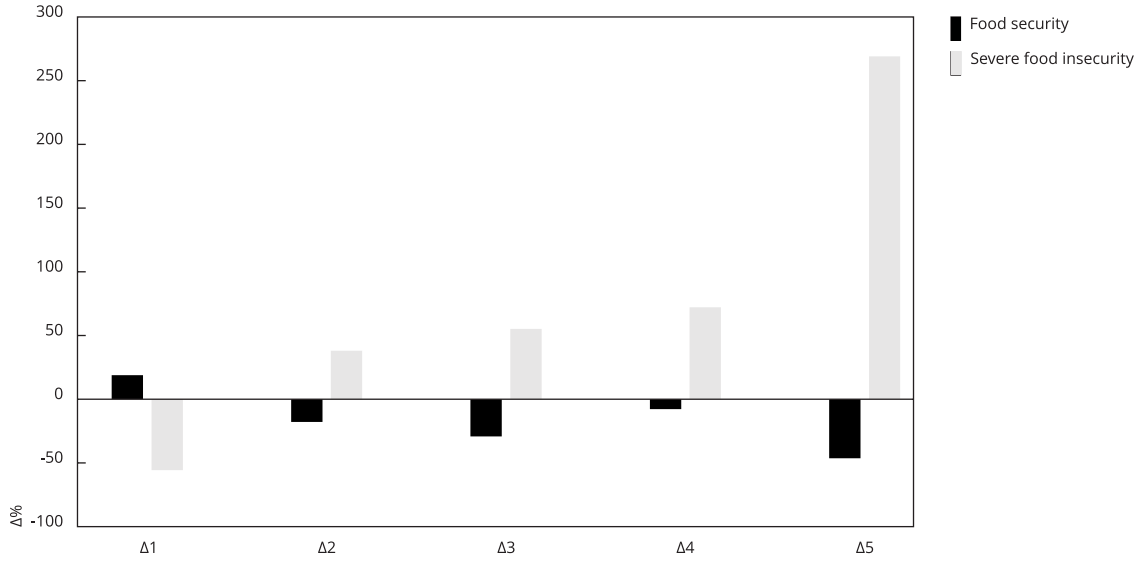
Figure 1

Variation in the prevalence (Δ%) * of food security and severe food insecurity in Brazil from 2004 to 2022, according to the short version the *Brazilian Food Insecurity Scale* (EBIA) **.



Δ1: 2004-2013; Δ2: 2013-2018; Δ3: 2018-2020; Δ4: 2020-2022; Δ5: 2013-2022.

* Variation (Δ), considering that the rates of food security/food insecurity were estimated by $[C\Delta = (P_{y2} — P_{y1})/ P_{y1}]_g$, where p_{y2} and p_{y1}, respectively, represent the prevalence rates in 2013 and 2004 for Δ1, 2018 and 2013 for Δ2, 2020 and 2018 for Δ3, 2022 and 2020 for Δ4, and 2022 and 2013 for Δ5.

** It was estimated using the first eight items of the short version of the *Brazilian National Household Sample Surveys* (PNAD) [3] from 2004 to 2013, the 2017/2018 *Brazilian Household Budget Survey* (POF) [2], and the *National Surveys on Food Security in the Context of the COVID-19 Pandemic in Brazil* (2020 and 2022) [4].

2017, despite the rising in food prices [12,13], compromising the quality of the meals served [14]. Moreover, government support for social participation was withdrawn, even though it was a central pillar of public policy formulation in Brazil since the redemocratization in 1985. The dissolution of the Food and Nutrition Security National Council (Consea) in early 2019 is an example of this governmental abandonment to social participation, as it was the intersectoral body responsible for advising the presidency on the fight against hunger and monitoring, planning, and evaluating food security and nutrition policies [6,15,16].

Government cash transfer programs implemented since July 2020 have been insufficient to stop the worsening of severe food insecurity in Brazil. Evidence from the 2022 Rede PENSSAN survey shows that unemployment, precarious and poorly paid jobs, income losses, and rising food prices may explain the further increase in severe food insecurity since late 2021 [4].

Currently, Brazil is an example of how policies based on fiscal austerity, combined with economic and political crises and governmental negligence facing the COVID-19 pandemic [17], can result in rising levels of hunger, even in countries recognized as large food exporters to the world.

Hunger and food insecurity in Brazil will reduce especially by restructuring public policies and actions aimed at reducing poverty and social inequalities. Renewed government commitment to the fight against hunger and poverty may hopefully rebuild policies and programs that proved to be successful and reimplement the Consea. Permanent structural changes are also needed, such as agrarian reform, support to smallholder farmers and traditional populations for food production and marketing, the strengthening of organic and agroecological production, the implementation of the National Policy for the Reduction of Pesticide Use, and guaranteed income and adjustments to the minimum

wage above inflation. These changes also include the right to education and high quality school meals, following the guidelines of the PNAE. It is also important to ensure government monitoring of food insecurity in the population level by institutions such as IBGE, as well as funding for research on food insecurity and the evaluation of public policies aimed at eradicating hunger and promoting access to healthy food. Finally, it is urgent to promote food and nutrition security in Brazil, based on debate with various segments of society, including the scientific community.

Contributors

R. Salles-Costa participated in the manuscript conception, literature search, data analysis and interpretation, and writing; and approved the final version of the article. A. M. Segall-Corrêa participated in the manuscript conception, literature search, data analysis and interpretation, and writing; and approved the final version of the article. V. P. Alexandre-Weiss participated in the manuscript conception, literature search, data analysis and interpretation, and writing; and approved the final version of the article. E. M. Pasquim participated in the manuscript conception, literature search, data interpretation, and writing; and approved its final version. N. M. Paula participated in the manuscript conception, literature search, data interpretation, and writing; and approved the final version of the article. J. B. Lignani participated in the manuscript conception, literature search, data analysis and interpretation, and writing; and approved the final version of the article. M. E. Del Grossi participated in the manuscript conception, literature search, data interpretation, and writing; and approved the final version of the article. S. A. Zimmermann participated in the manuscript conception, literature search, data interpretation, and writing; and approved the final version of the article. M. A. T. Medeiros participated in the manuscript conception, literature search, data interpretation, and writing; and approved the final version of the article. S. M. C. Santos participated in the manuscript conception, literature search, data interpretation, and writing; and approved the final version of the article. R. S. Maluf participated in the manuscript conception, literature search, data interpretation, and writing; and approved the final version of the article.

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References

1. Food and Agriculture Organization of the United Nations; International Fund for Agricultural Development; United Nations Children's Fund; World Food Programme; World Health Organization. The state of food security and nutrition in the world 2022. Repurposing food and agricultural policies to make healthy diets more affordable. Rome: Food and Agriculture Organization of the United Nations/International Fund for Agricultural Development/United Nations Children's Fund/World Food Programme/World Health Organization; 2022.
2. Instituto Brasileiro de Geografia e Estatística. Pesquisa de Orçamentos Familiares 2017-2018: análise da segurança alimentar no Brasil. https://biblioteca.ibge.gov.br/visualizacao/livros/liv101749.pdf (accessed on 24/Aug/2022).
3. Instituto Brasileiro de Geografia e Estatística. Pesquisa Nacional por Amostra de Domicílios: segurança alimentar. https://biblioteca.ibge.gov.br/visualizacao/livros/liv91984.pdf (accessed on 31/Aug/2022).
4. Rede Brasileira de Pesquisa em Soberania e Segurança Alimentar e Nutricional. II VIGISAN National Survey on Food Insecurity in the Context of the Covid-19 Pandemic in Brazil. https://olheparaafome.com.br/wp-content/uploads/2022/09/OLHESumExecutivoINGLES-Diagramacao-v2-R01-02-09-20224212.pdf (accessed on 24/Aug/2022).
5. Salles-Costa R, Ferreira AA, Mattos RA, Reichenheim ME, Pérez-Escamilla R, Bem-Lignani J, et al. National trends and disparities in severe food insecurity in Brazil between 2004 and 2018. Curr Dev Nutr 2022; 6:nzac034.
6. Vasconcelos FAG, Machado ML, Medeiros MAT, Neves JA, Recine E, Pasquim EM. Public policies of food and nutrition in Brazil: from Lula to Temer. Rev Nutr 2019; 32:e180161.
7. Sousa LRM, Segall-Corrêa AM, Ville AS, Melgar-Quiñonez H. Food security status in times of financial and political crisis in Brazil. Cad Saúde Pública 2019; 35:e00084118.
8. Vieira FS. Gasto federal com políticas sociais e os determinantes sociais da saúde: para onde caminhamos? Saúde Debate 2020; 44:947-61.
9. Sousa LRM, Ditterich RG, Melgar-Quiñonez H. A pandemia de Covid-19 e seus entrelaçamentos com desigualdade de gênero, insegurança alimentar e apoio social na América Latina. Interface (Botucatu) 2021; 25 Suppl 1:e200651.
10. Grisa C, Schmitt CJ, Silva MAP, Leite SP, Zimmermann S, Barbosa YRS. A desestruturação das políticas públicas de fortalecimento da agricultura familiar: mudanças institucionais, estratégias de desmonte e novas configurações. https://br.boell.org/sites/default/files/2022-10/boll_desmonte_politicas_publicas_final.pdf (accessed on 18/Nov/2022).
11. Mata MM, Neves J, Medeiros MAT. Hunger and its associated factors in the Western Brazilian Amazon: a population-based study. J Health Popul Nutr 2022; 41:36.
12. Zimmermann AS, Delgado NG. El desmonte del Sistema Nacional de Seguridad Alimentaria y Nutricional y la garantía del derecho humano a la alimentación en Brasil. Polis Revista Latinoamericana 2022; 22:32-51.
13. Madeiro C. Sem reajuste há 5 anos, merenda vira bolacha e suco em cidades pobres. https://ifz.org.br/2022/09/11/sem-reajuste-ha-5-anos-merenda-vira-bolacha-e-suco-em-cidades-pobres/ (accessed on 15/Nov/2022).
14. Observatório da Alimentação Escolar, Associação Nacional de Pesquisa em Financiamento da Educação. Em defesa de reajustes nos valores per capita do PNAE. 2021. https://alimentacaoescolar.org.br/media/acervo/documentos/Em_defesa_de_reajustes_nos_valores_per_capita_do_PNAE_-_FACTSHEET.pdf (accessed on 15/Nov/2022).
15. Castro IRR. A extinção do Conselho Nacional de Segurança Alimentar e Nutricional e a agenda de alimentação e nutrição. Cad Saúde Pública 2019; 35:e00009919.
16. Moraes VD, Machado CV, Magalhães R. O Conselho Nacional de Segurança Alimentar e Nutricional: dinâmica de atuação e agenda (2006-2016). Ciênc Saúde Colet 2021; 26:6175-87.
17. The Lancet. New beginnings for Latin America? Lancet 2022; 400:707.

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