EVOLUTION OF RISK FACTORS FOR CHRONIC NON-COMMUNICABLE DISEASES BETWEEN 2019 AND 2023 IN THE POPULATION OF THE CAPITAL OF GOIÁS

Ysabelle de Oliveira Saraiva [1]
Amanda Vitória de Oliveira Lima [2]
Jalsi Tacon Arruda [3]

ABSTRACT

Brazil is currently undergoing an epidemiological transition, with an increase in chronic noncommunicable diseases (CNCDs or NCDs) to the detriment of infectious diseases. Given this, it is important to monitor risk factors for NCDs in places such as Goiânia. The objective of this study is to analyze the evolution of risk factors for chronic noncommunicable diseases in the capital of Goiás, from 2019 to 2023. This descriptive cross-sectional study used data from the VIGITEL system for the years 2019 and 2023, collected through telephone interviews with adults in Goiânia. Between 2019 and 2023, there was a 2.4% increase in the total number of smokers, especially among women (2.8%), although the prevalence remained higher among men. There was a 0.9% reduction in passive smokers in the home, but exposure to secondhand smoke at work remained a concern. Also, overweight increased by 2.3%, although obesity decreased by 1.8%. There was a decrease in the intake of healthy foods and ultra-processed foods, with a 6.4% drop in daily consumption of fruits and vegetables. In addition, insufficient physical activity decreased by 6.7%. Excessive alcohol consumption increased among men and decreased among women. The prevalence of diabetes increased by 2.2%, especially among women, while hypertension did not show significant changes. Statistical calculations indicate that the variables analyzed in general did not change significantly. Therefore, risk factors for NCDs represent a significant challenge in Goiânia. Consequently, effective public policies are essential to mitigate the impact of these diseases on its population.

Keywords: Chronic noncommunicable diseases; Risk factors; Public health.

INTRODUCTION

The national scenario is shifting from a pattern of mortality and morbidity dominated by infectious diseases to a profile where chronic noncommunicable diseases (NCDs) predominate. NCDs are responsible for more than half of all deaths

[1] Medical student at the Evangelical University of Goiás – UniEVANGÉLICA, Brazil –ysabelleosaraiva@gmail.com , ORCID: https://orcid.org/0009-0007-7800-8685

[2] Medical student at the Evangelical University of Goiás – UniEVANGÉLICA, Brazil – amanda.lima@aluno.unievangelica.edu.br, ORCID: https://orcid.org/0009-0004-4953-8570

3 Professor at the Evangelical University of Goiás – UniEVANGÉLICA, Brazil – jalsitacon@gmail.com, ORCID: https://orcid.org/0000-0001-7091-4850

3

in Brazil today. The main behavioral risk factors for the development of NCDs include smoking, alcohol consumption, poor diet, and physical inactivity. The total costs related to hypertension, diabetes, and obesity in the Brazilian Unified Health System (SUS) reached BRL 3.45 billion in 2018. ([1,2,3]).

These changes in the Brazilian epidemiological profile pose a challenge to the Unified Health System (SUS) to review its healthcare model. This requires a continuous effort to monitor and evaluate the efficacy and effectiveness of public health measures. For this reason, the Strategic Action Plan for Tackling Chronic Noncommunicable Diseases in Brazil 2021-2030 ([1,2])was developed.

In view of this, the present study is justified by analyzing updated data on risk factors for NCDs in the capital of the state of Goiás, Goiânia. In this way, it is possible to use the presented material to adapt the objectives established in the Action Plan to the local context and needs. This study aims to analyze the evolution of risk factors for chronic noncommunicable diseases in the capital of Goiás between 2019 and 2023 ([2]).

METHODS

This descriptive cross-sectional study used data from the VIGITEL surveillance system, which collects information on risk and protective factors for chronic diseases in the adult population of Brazilian state capitals and the Federal District. Data from 2019 and 2023 were analyzed, with a confidence coefficient of 95% and a sampling error of 2%.

The variables analyzed included smoking prevalence, obesity, dietary habits and physical activity, alcohol consumption, diabetes, and hypertension, stratified by sex and age. Data were compared using descriptive and frequency analyses, using Student's t-test to assess significant changes between years, with a significance level of 5%. The VIGITEL study was approved by the National Committee for Ethics in Research Involving Human Subjects (CONEP) of the Brazilian Ministry of Health.

RESULTS

In 2019, 2,050 telephone interviews were conducted in Goiânia to collect data for the Surveillance System of Risk Factors and Protection for Chronic Diseases by Telephone Survey (VIGITEL). In 2023, 400 interviews were conducted via landline and 400 via mobile phone in the capital of Goiás, totaling 800 interviews [4].

The questions in the 2023 VIGITEL questionnaire address: demographic and socioeconomic characteristics of individuals (age, gender, marital status, race/color, level of education, number of people in the household, number of adults, and number of telephone lines); characteristics of dietary patterns and physical activity associated with the occurrence of NCDs (e.g., frequency of consumption of fruits and vegetables and soft drinks, and frequency and duration of physical exercise and television viewing habits); reported weight and height; frequency of cigarette and alcohol consumption; self-assessment of the interviewee's health status, reference to previous medical diagnosis of high blood pressure, diabetes, and depression; early cancer screening tests in women; possession of health insurance or medical plan; and issues related to traffic situations [5].

In Goiânia, there was a 2.4% increase in the total number of smokers, with the female group standing out with a 2.8% increase compared to 2019, although the prevalence of smokers remains higher among males. In contrast, there was a 0.9% reduction in exposure to secondhand smoke at home. The total number of obese people also decreased by 1.8%. However, the total number of overweight people increased by 2.3%. The data show that there was a decrease in the prevalence of consumption of vegetables, fruits, beans, and unprocessed or minimally processed foods, as well as soft drinks and ultra-processed foods in 2023 compared to 2019. Of particular note is the 6.4% decrease in the consumption of five or more daily servings of fruits and vegetables.

In addition, insufficient physical activity decreased by 6.7% among all respondents between 2019 and 2023, with women accounting for the majority of this

decrease. Total excessive alcohol consumption did not change significantly when analyzed in isolation, registering a decrease of 0.1%. However, when looking at the groups divided by gender, it could be observed that excessive alcohol consumption increased by 3.2% among men, whereas it decreased by 2.7% among women. Finally, there was a 2.2% increase in the total number of people diagnosed with diabetes, with the female group standing out with a difference of 4.2% from 2019 to 2023. Regarding the diagnosis of hypertension, no significant difference was observed between the years analyzed.

For comparative calculations, the Student's t-test was applied to the total values collected. The results obtained were: t-statistic = 0.225 and p-value = 0.823. When the p-value is less than 0.05, we consider that there is a significant difference between the means of the two groups compared. However, in this case, the p-value of 0.823 is much higher than 0.05, indicating that the differences observed between the 2019 and 2023 data are not statistically significant. This means that, in general terms, these specific variables did not undergo relevant changes during this period.

CONCLUSION

In summary, risk factors for chronic noncommunicable diseases pose a significant challenge to public health in Goiânia. The increase in the number of smokers, especially among women, and the growing trend of overweight individuals require attention, as they contribute to the prevalence of diseases such as type 2 diabetes and hypertension. Despite the reduction in insufficient physical activity and consumption of ultra-processed foods, the intake of healthy foods has also decreased. Exposure to secondhand smoke at work and increased consumption and excessive alcohol consumption among men are other areas that require strategic planning to combat.

However, statistical calculations suggest that the variables analyzed, in general, did not undergo significant changes during this period, which points to a failure in the results of the policies currently in place to combat NCDs. Given the above, effective

prevention and control of these risk factors are essential to reduce morbidity, mortality, and healthcare expenditures in Goiânia.

REFERENCES

1. MARTINS, Thalyta *et al*. Transition of morbidity and mortality in Brazil: a challenge 30 years after the implementation of the SUS. **Ciência & Saúde Coletiva**, v. 26, n. 10, p. 4483-4496, 2021.

2. **BRAZIL**. Ministry of Health. Strategic Action Plan to Combat Chronic Diseases and Noncommunicable Diseases in Brazil 2021-2030. Brasília: Ministry of Health, 2021.

3. NILSON, Eduardo *et al*. Cost of obesity, hypertension, and diabetes. **Pan American Journal of Public Health**, v. 43, 2019.

4. **BRAZIL**. Ministry of Health. Vigitel Brazil 2019: surveillance of risk factors and protection for chronic diseases by telephone survey: estimates on the frequency and sociodemographic distribution of risk factors and protection for chronic diseases in the capitals of the 26 Brazilian states and the Federal District in 2019. Brasília: Ministry of Health, 2019.

5. **BRAZIL**. Ministry of Health. Vigitel Brazil 2023: surveillance of risk factors and protection for chronic diseases by telephone survey: estimates on frequency and sociodemographic distribution of risk factors and protection for chronic diseases in the capitals of the 26 Brazilian states and the Federal District in 2023. Brasília: Ministry of Health, 2023.