

Characteristics of food consumption during the COVID-19 pandemic among residents of the metropolitan region of Belém



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ABSTRACT

INTRODUCTION: Food is important for a healthy life, should be varied and of nutritional quality. Given this, a research was developed addressing dietary variables of the residents of the metropolitan region of Belém, Marabá and Santarém during the first peak of the pandemic of the new coronavirus. **OBJECTIVES:** To observe the dietary practices of participants from March to August 2020. **METHODOLOGY:** The present study was a research project developed by the Academic League of Collective Health and Parasitology, of the

UNINASSAU University Center, where the electronic form (Google forms) was used in which the participants (over 18 years old) answered objective questions related to the period of the pandemic, mainly about the food consumed. This study was approved by the CEP of the Evandro Chagas Institute on 08/21/2020 with the opinion of nº 4.229.578. **RESULTS AND DISCUSSION:** With social isolation, 89.8% of the 275 respondents claimed a decrease in trips to supermarkets. Regarding the change in food consumption, it was observed: 33.1% stated that they had not changed their eating habits, 18.5% were consuming a greater amount of industrialized foods, 23.3% were consuming industrialized and natural foods, and 25.1% were consuming a greater amount of natural foods, which is positive, because these foods contribute to the strengthening of the immune system. In addition, the frequency of consumption of certain foods was addressed, in which there was a higher percentage for fruits and vegetables with 62.5% and 59.6%, respectively. However, a significant value for pasta (46.9%) and sweets (38.5%). **CONCLUSION:** The changes reported by the participants show a qualitative improvement in the diet from the increase in the consumption of fruits and vegetables, but there are marked percentages of the consumption of pasta and sweets.

Keywords: Food, Covid-19, Food consumption.

1 INTRODUCTION

Food is important for a healthy life, it must be varied and of nutritional quality. A good diet is an important determinant of good health and longevity, which involves understanding the importance of an adequate and balanced diet, which evolves over time and is influenced by a variety of social and economic factors in a complex form of interaction to shape personal eating patterns. (PAHO, 2019). In addition, an unbalanced diet, both in quantity and quality, can generate a series of health consequences, and is linked to the development of diseases, especially Chronic Non-Communicable Diseases (NCDs). NCDs are a group of diseases that include obesity, cardiovascular diseases, diabetes, hypertension, cancer and some lung diseases, these decrease the quality and life expectancy



(ABARCA-GÓMEZ, 2017). Therefore, it is important to prioritize in natura or minimally processed foods (BICALHO et al., 2020).

In 2020 the world met a new SARS Cov-19 virus, or better known as COVID-19, and which has been officially recognized by the WHO (World Health Organization) as a global pandemic crisis. After the arrival of COVID-19 in the world, measures to control and prevent the disease were taken by local health authorities in order to reduce mortality rates. The measures of interventions most adopted by the governments of several countries were social distancing (social isolation) and lockdown (quarantine) (montez, 2022), Because of the quarantine imposed by the government, the eating and behavioral habits of the population have changed. Confined people became bored, stressed, and vulnerable to an exaggerated and compulsive food intake (RODRÍGUEZ-PÉREZ et al., 2020). Because of this, it was critical that at this time the individual was in a good immune state. In the case of COVID-19, boosting the immune system would help fight infections, through factors such as healthy diet, a good nutritional status, also helping to avoid pre-existing chronic non-communicable diseases (Raphaelli, 2021). The successful adoption of social restriction as a public health measure has proven benefits in reducing the rate of transmission of COVID-19, but negative effects are linked to this restriction and may have health consequences in the medium and long term. (MALTA et al., 2020)

Given this, a research was developed addressing dietary variables of the residents of the metropolitan region of Belém, Marabá and Santarém during the first peak of the novel coronavirus pandemic, with the objective of observing the dietary practices of the participants from March to August 2020.

2 METHODOLOGY

The present work is a quantitative and qualitative study, it was a research project developed by the Academic League of Collective Health and Parasitology, of the UNINASSAU Belém University Center, where an electronic form (Google forms) was used in which the participants answered objective questions related to the period of the pandemic, mainly about the food consumed. The same was shared through the Internet by social media (Instagram, facebook and whatsapp) to adults, who were encouraged to disclose to their contacts.

The questions had only as an option of answers (1) Yes and (2) No. And the following questions were: (1) Decreased the trip to the supermarket, (2) They did not change eating habits, (3) They were consuming industrialized, (4) They consumed industrialized and natural, (5) They consumed only natural foods. After this first round of questions there was the second round directed to the frequency of consumption (1) Fruits, (2) Vegetables, (3) Pasta, (4) Sweets, for these it was possible to mark more than one alternative. And finally the third round, being possible only answers (1) Yes, and (2) No. The question was (1) Reports weight gain, (2) Does not report weight gain.

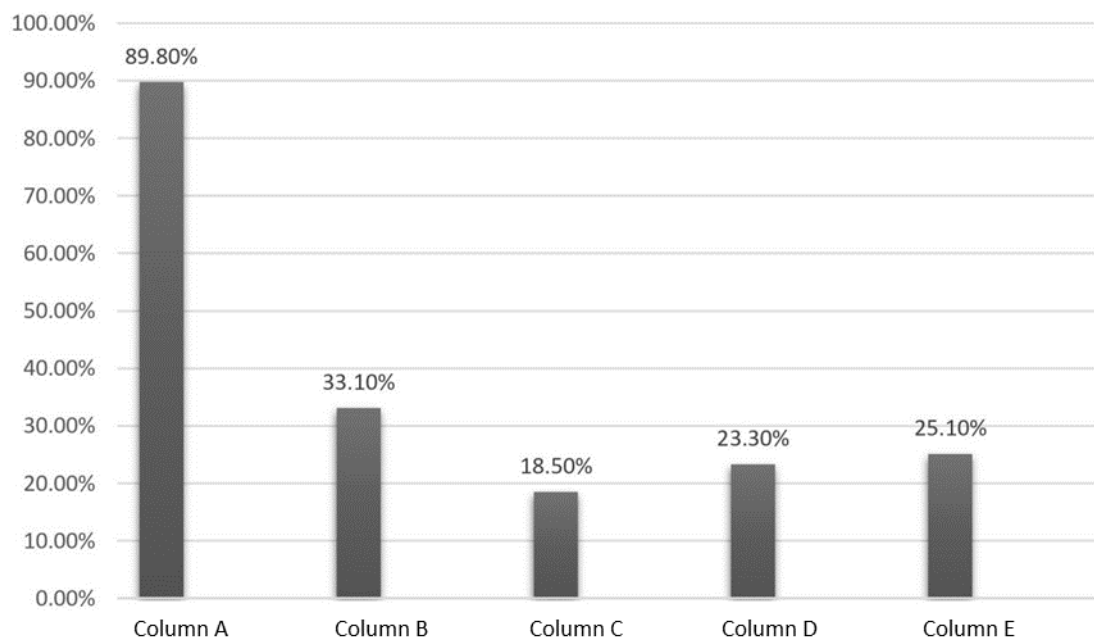


This study was approved by the Ethics and Research Committee (CEP) of the Evandro Chagas Institute on 08/21/2020 with the opinion number 4,229,578. Only individuals over 18 years of age of both sexes, Brazilians, with or without symptoms of COVID-19, totaling 275 participants, between March and August 2020, were used as inclusion criteria in the study.

In addition, articles and scientific papers whose theme was food consumption during the pandemic period in Brazil (2019-2022) were used on the platforms Scielo, Google scholar, Medline, and VHL using the Boolean operators AND and the descriptors such as Covid19, Food, Food consumption.

3 RESULTS AND DISCUSSION

Figure 1. Chart on participants' habits during the pandemic.

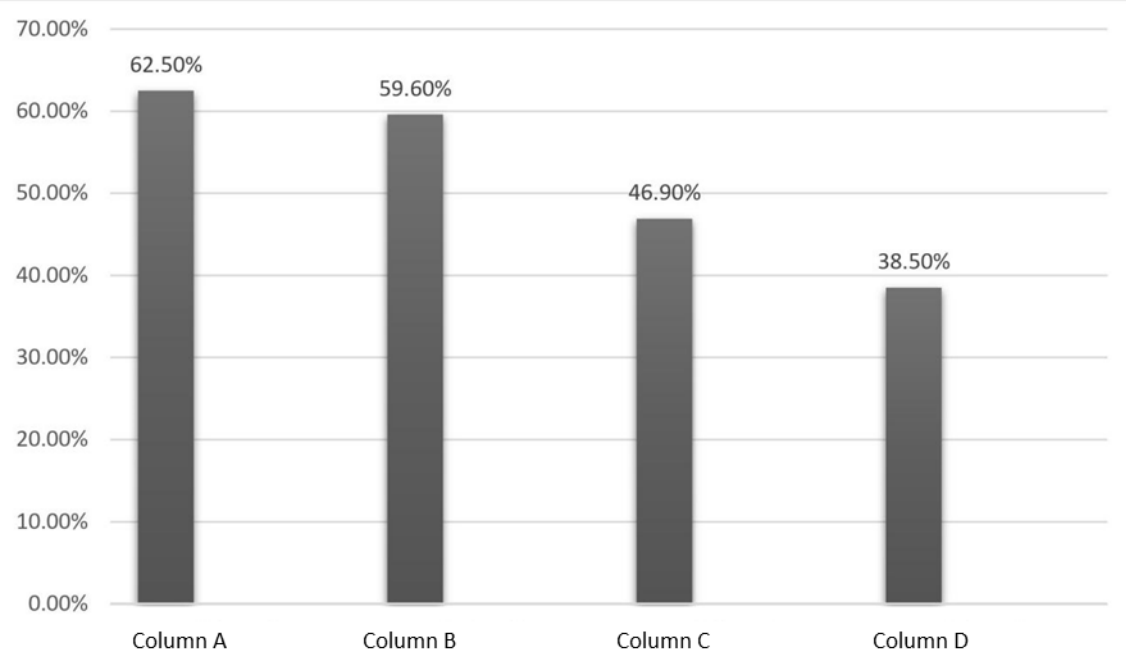


In graph 1 it is possible to see that with social isolation 89.8% (Column A) of the 275 participants decreased their trips to the supermarket. Aro *et al.* 2021 also found in their research during the pandemic period that 59.2% of their respondents remained at home but left for the grocery store. In this way, the impact that the pandemic has had in Brazil is notorious, even altering trips to supermarkets, something that was so routine. Moreover, in the first graph it is noted that there was a change of 33.10% (Column B) in the eating habits of the interviewees with 18.5% (Column C) consuming more industrialized foods, 23.30% (Column D) consumed industrialized and natural foods, and 25.10% (Column E) consumed only natural foods. According to *Maynard 2020*, in his study only 19.7% of respondents consumed vegetables every day of the week and 26.7% fruits. In the same study



there is a large record in the consumption of fried foods (27.6%), snacks (16.9%) and fast food (21.0%) at least once a week. Thus having very close results in different regions of the country.

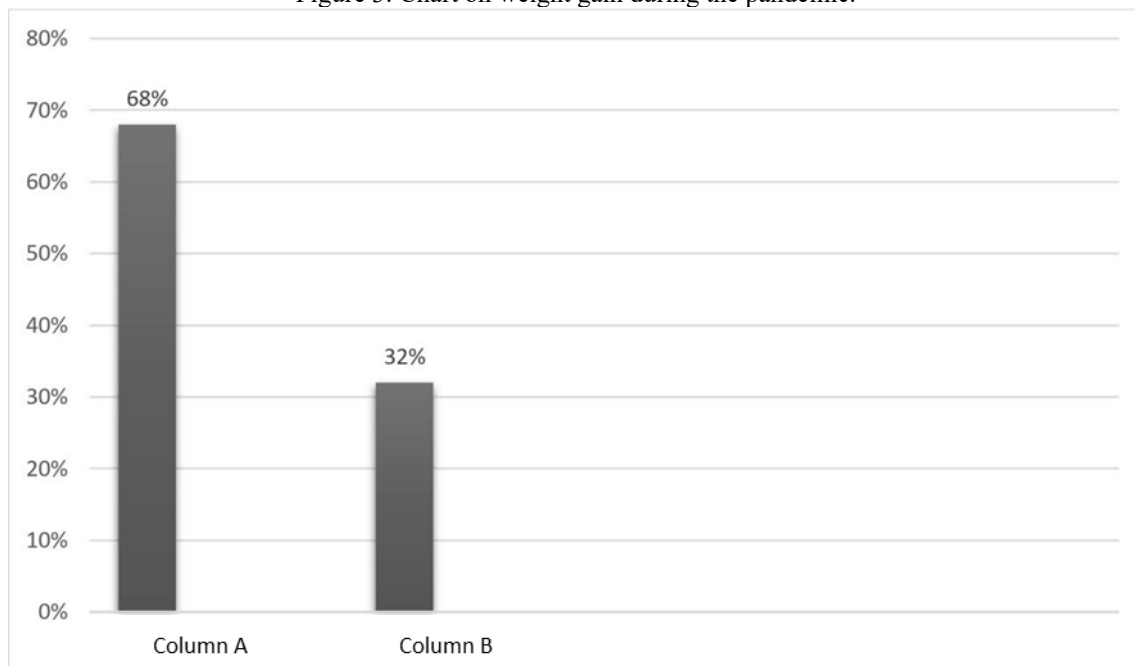
Figure 2. Chart on food preference during the pandemic.



In graph number 2 where we have the second round of questions we identified that 62.5% (Column A) reported the consumption of fruits, 59.6% (Column B) vegetables, 46.9% (Column C) pasta and 38.1% (Column D) sweets. According to *Montez 2022* during the pandemic there has been a significant increase in the consumption of fruits, vegetables and legumes in countries including Brazil, Spain, China, France, the Netherlands, and India. Thus, there was an improvement in the markers of healthy eating.



Figure 3. Chart on weight gain during the pandemic.



In the third round of the questions, represented by graph 3 composed of two very objective questions about weight gain in this period, where 68% (Column A) the interviewees reported no weight gain, and 32% (Column B) reported that they gained weight during this period. Pereira *et. al* 2021 in his studies highlights and justifies that during the period of social isolation there was a change in eating habits and decrease in the practice of physical activity, increasing the consumption of soda, fast food, and ultra-processed foods, consequently generating a weight gain. *Rafaelli 2021* also highlighted in his studies an increase in the consumption of ultra-processed foods, but also brought us the increase in the consumption of healthier foods, due to the longer time of availability at home, thus possibly being one of the factors that covered the metropolitan region of Belém, since in the same the highest index was of no weight gain.

4 CONCLUSION

The changes reported by the participants show a qualitative improvement in the diet from the increase in the consumption of fruits and vegetables, but there are marked percentages of the consumption of pasta and sweets.

Not only in the metropolitan region of Belém, but according to studies conducted in other regions, the negative impact of the pandemic on the dietary profile of the population, as well as its consequences on health, is evident.

The research becomes important to society because the results suggest that there is a need for an intervention in relation to the increase in the consumption of ultra-processed products, since eating



behaviors are directly linked to a higher prevalence of the development of chronic non-communicable diseases, and in the worsening of the clinical status of the individual who contracts Covid-19.

CONFLICT OF INTEREST

There is no conflict of interest in the research.



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