

Consumers' perceptions and consumption behaviour concerning red fruits

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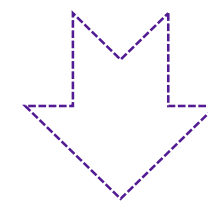
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Introduction

Red fruits are berries known for their potential health benefits, namely due to their richness in **antioxidants, vitamins and minerals**. These fruits stand out from others owing to their **high anthocyanins content** (1,2).

They have shown potential health benefits such as, **neuroprotective** (3), **cardioprotective** (4), **anti-inflammatory** (5) and **anticancer** (6), being **reducers of metabolic diseases** like hyperglycemia and hypercholesterolemia (7).

Despite the fact that consumers are becoming more aware of the importance to follow a healthy diet, **red berries** are still low consumed worldwide, being part of the **least consumed fruits** in 2021 (8).



The aim of this study was to assess consumers' perception of red fruits purchase, conservation, preparation and consumption habits and their potential health benefits

Methodology

A **questionnaire** was applied and distributed through e-mails and social media. From January to February of 2023, **507 individuals** answered this survey.

It focused on individuals' perception of red fruits consumption and purchase habits; reasons, frequency and season of consumption; preparation and conservation procedures and potential health benefits.

Results

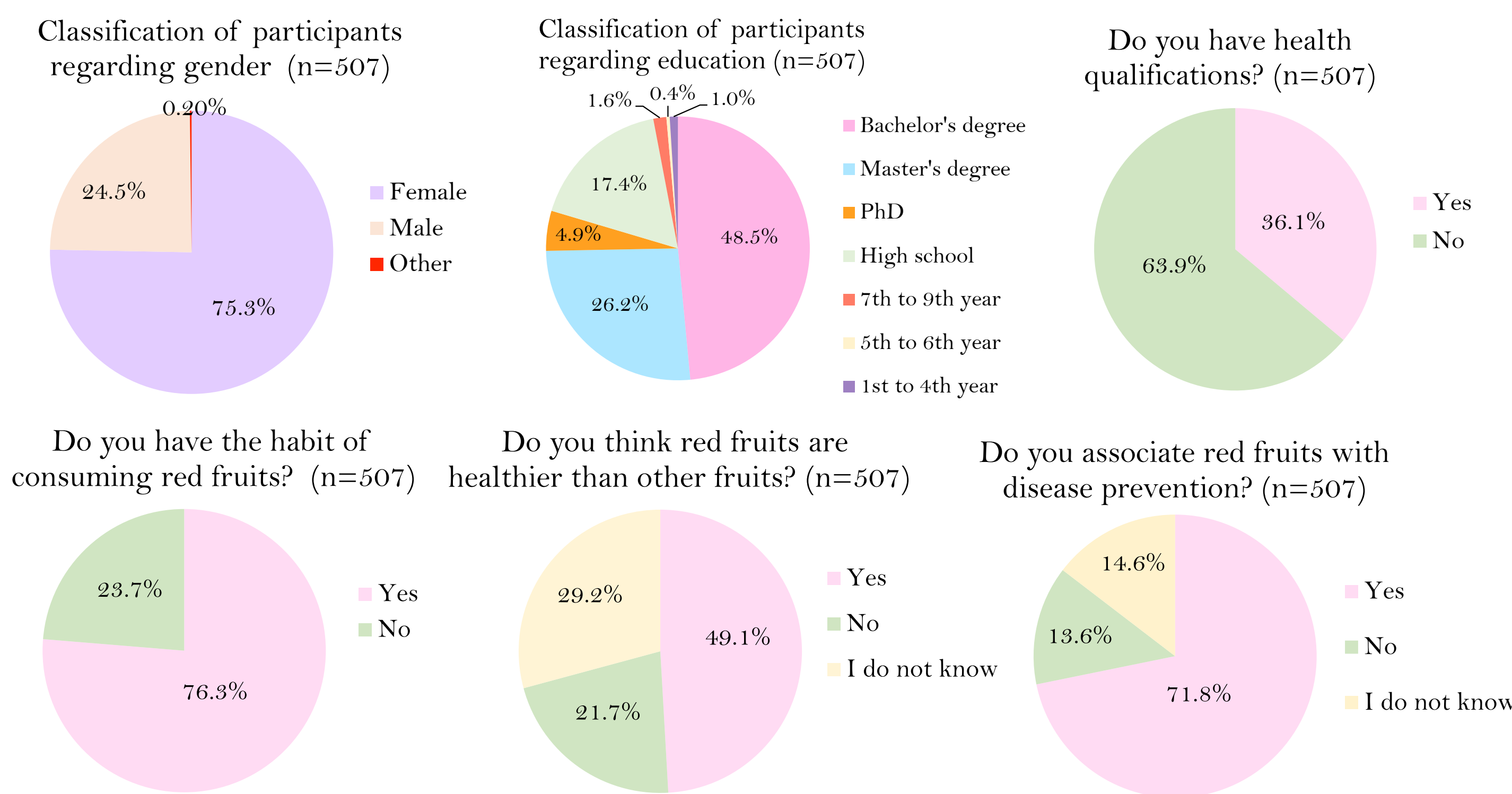


Figure 1. Classification of participants and some results obtained in this questionnaire.

- 62.7% were aged between 18–29 years, 75.3% were females and 60.4% were from Lisbon (Figure 1).
- The majority had higher education (79.6%) and a considerable number had health qualifications (36.1%).
- **387 participants (76.3%)** claimed to **frequently consume red fruits**, mainly because of their organoleptic characteristics (96.1%) and **84 individuals** mentioned **potential health benefits as a consumption motivation**.
- Those who do not consume essentially declared high price as the main reason (60.0%).
- **49.1% of the participants considered that red fruits are more beneficial than others**, being associated with **disease prevention by 71.8%**.
- Most people purchase red fruits at super and hypermarkets (88.4%), eat them mostly fresh in spring and summer, and keep them in the fridge until consumption.

- In summer, strawberry was the **most frequently consumed fruit**, followed by raspberry and cherry (Figure 2).
- Despite being the most consumed fruit, strawberry was referred to be consumed everyday only per 16 out of 387 individuals, reporting a **considerable low daily consumption**.
- Cranberry and jaboticaba were the least consumed berries as they are quite unpopular in Portugal.

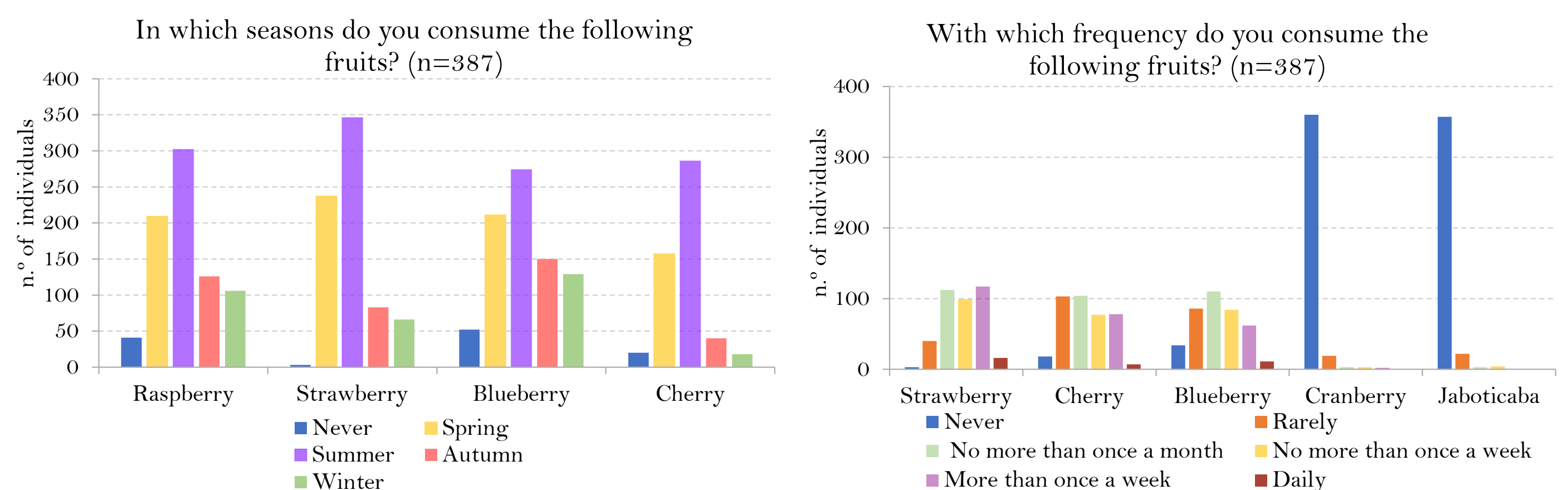


Figure 2. Seasons and frequency of red fruits consumption.

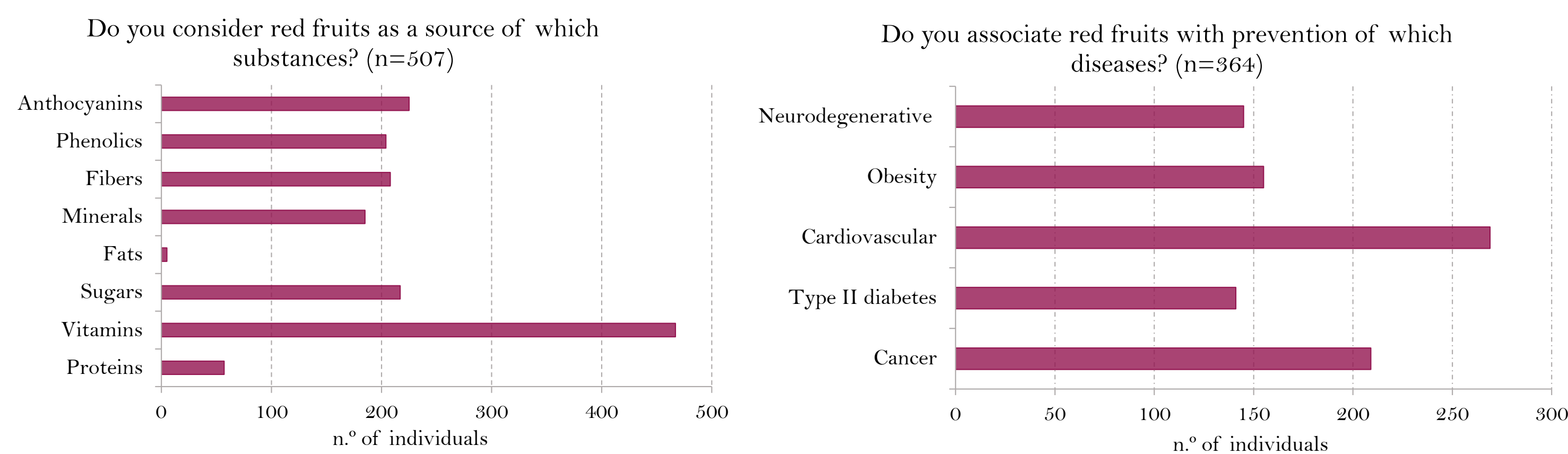


Figure 3. Disease prevention and substances related with red fruits.

- **Vitamins** (92.1%) and **anthocyanins** (44.4%) were the most common substances related to red berries (Figure 3).
- Red fruits were mostly associated with **antioxidant effects** (87.8%), **general health and well-being** (69.6%), and **prevention of cardiovascular diseases** (73.9%) and **cancer** (57.4%).

Conclusions

- Our findings suggest that most of this population consumes red fruits, despite not being a daily consumption. It was verified a reasonable knowledge of their health benefits; however, several did not recognize their advantages, even having higher education.
- It is essential to **enhance the spread of scientific information** regarding the potential health benefits associated with the consumption of red fruits in order to **increase awareness** and to **promote public health** of the population.

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