

# DID COVID-19 PANDEMIC CHANGE SUPPLEMENTATION PRACTICE – AN OBSERVATIONAL STUDY FROM CROATIA AND BOSNIA AND HERZEGOVINA

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## Introduction and Objectives

COVID-19 pandemic was announced on March 20, 2020 and since then the whole world has changed. High virulence and mortality made people look into alternative ways to strengthen immunity, which eventually led to increased interest for supplements, mainly vitamin C, D, and zinc. Dietary components such as vitamins C, D, E, zinc, selenium and the omega 3 fatty acids have well-established immunomodulatory effects, with benefits in infectious disease. Several studies have shown that the use of aforementioned supplements results in milder form of COVID-19.

This research intended to analyze supplementation practice among adults from Croatia and Bosnia and Herzegovina, depending on their COVID-19 status.

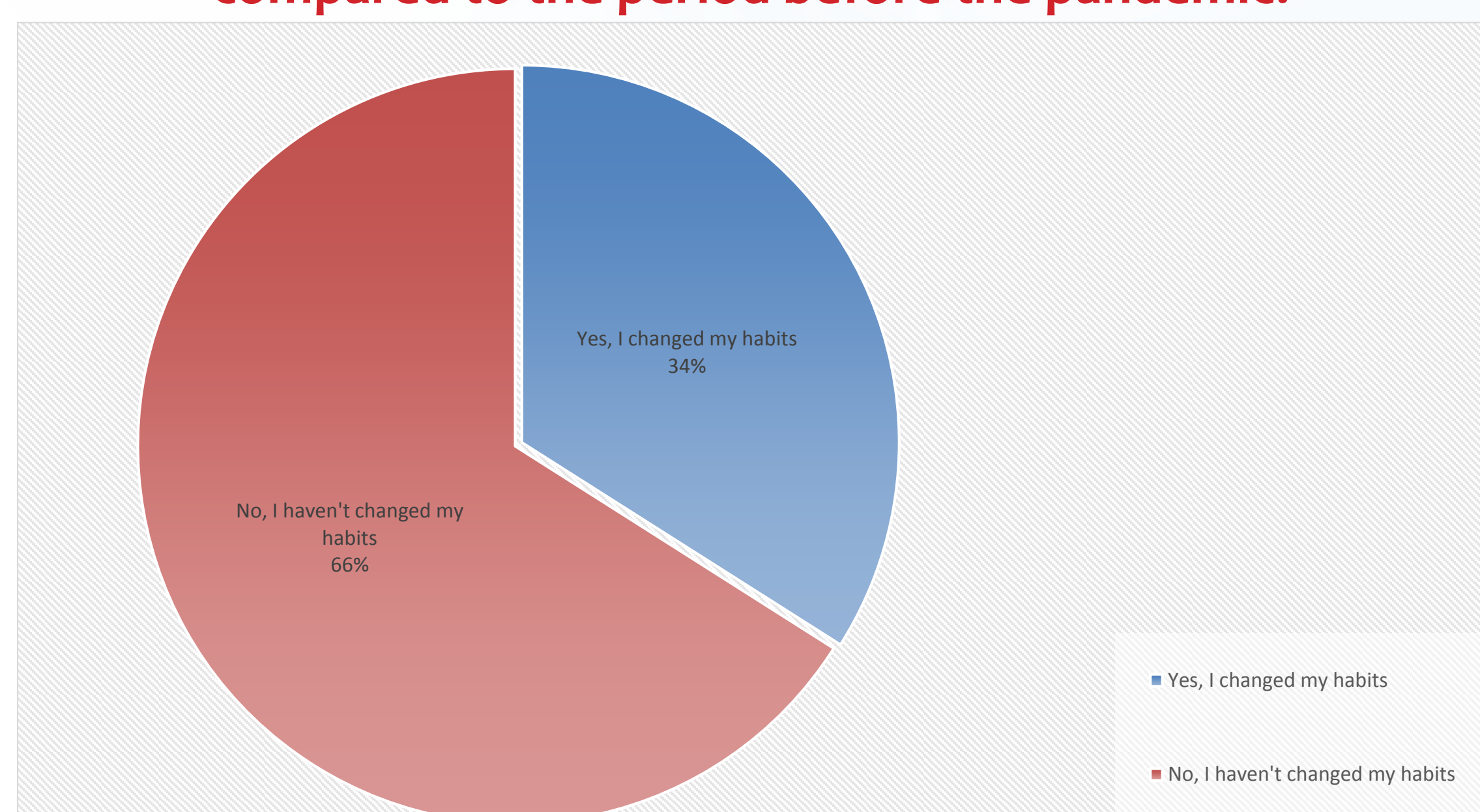
## Participants and Methods

An anonymous, online, study-specific questionnaire was completed by 960 adults from Croatia and Bosnia and Herzegovina, aged 18 to 76 years. The questionnaire was conducted in May 2021.

**Table 1. Age and BMI participants**

Participants	Average±SD	Min	Max
Age (years)	39±9,93	18	76
BMI (kg/m <sup>2</sup> )	24,37±3,96	17,7	41,2

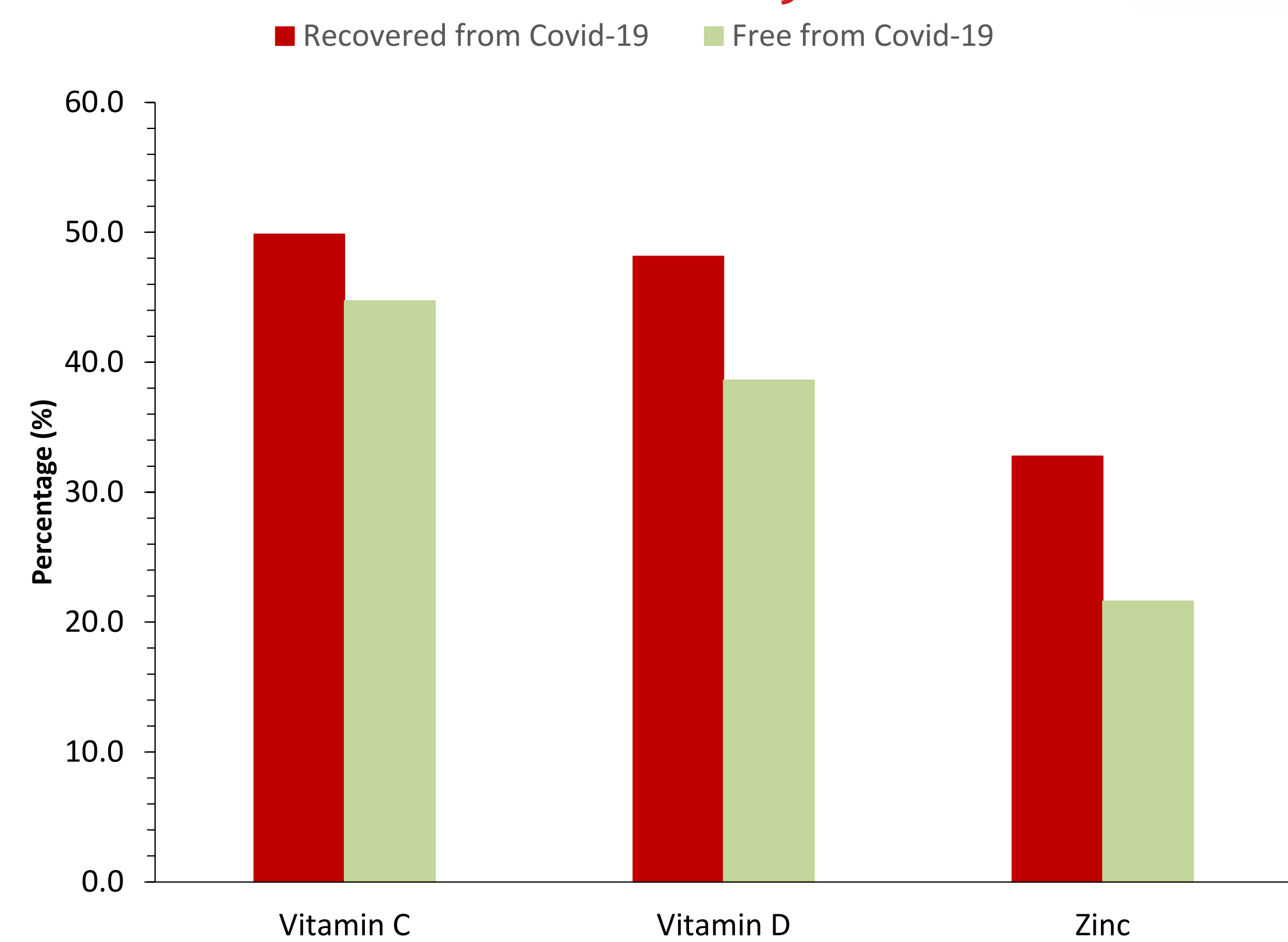
**Picture 1. Did you change your life and / or eating habits compared to the period before the pandemic?**



### What have you changed?

- I pay more attention to a healthier diet
- Now I exercise and move more
- I prepare food at home more often

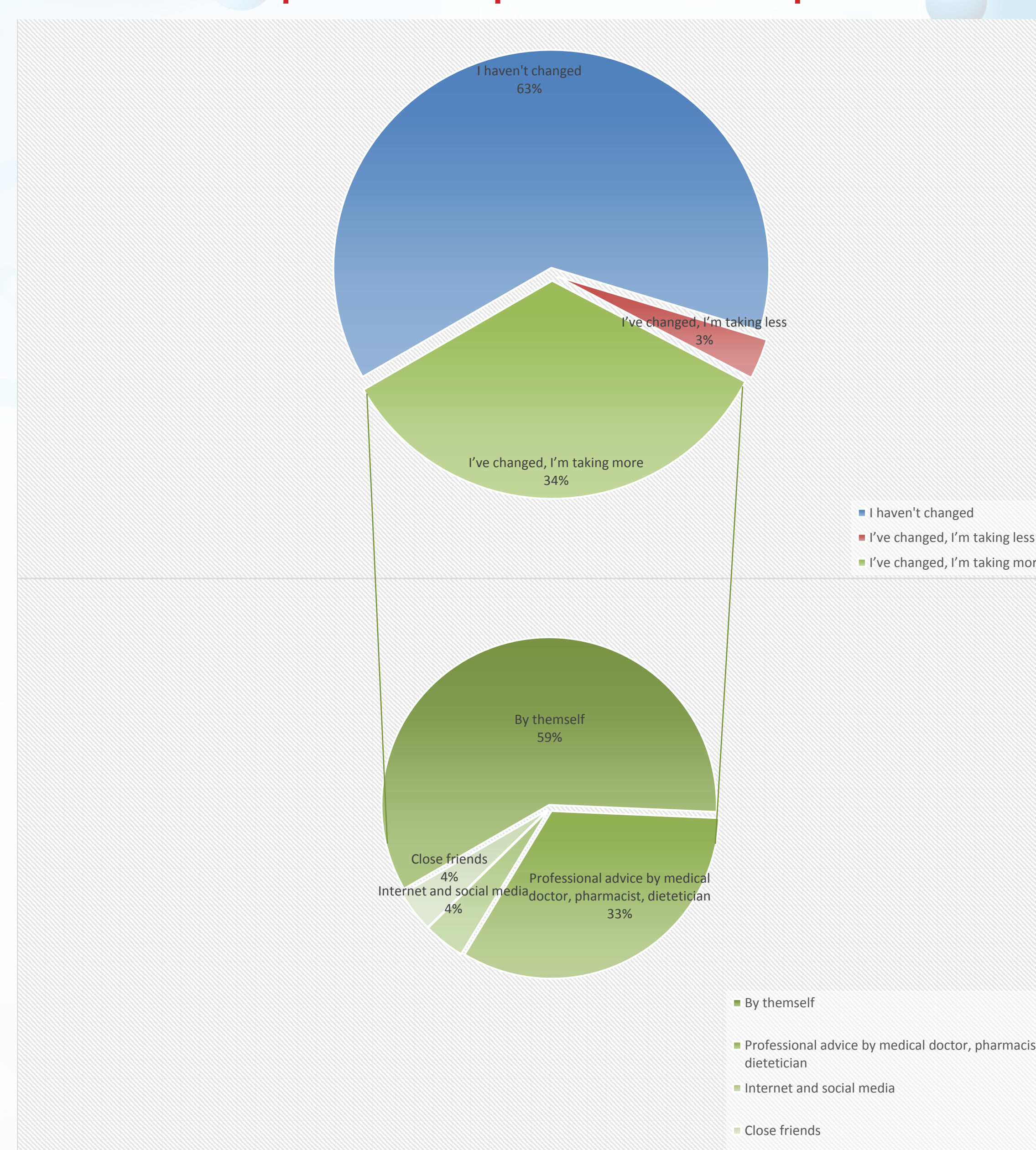
**Picture 3. Difference in supplementation between people who recovered from COVID-19 and those who were free from COVID-19**



## Results

37% of study participants recovered from COVID-19, the majority had mild symptoms (56%) and 9% had severe symptoms (including 2% who were hospitalized). 34% of participants said they were using more supplements in comparison to prior pandemic, and the decision was mainly based on personal opinion (Picture 2). Higher supplement use was reported by 37% of those recovered from COVID-19, but also among 63% of those free from COVID-19. The most common supplements used by people who recovered from COVID-19 were vitamin C, vitamin D, and zinc, consumed by 49,9%, 48,1%, and 32,8%, respectively. Additional supplements which were most commonly used were probiotics, multivitamins, propolis, vitamin B complex and beta glucan. Finally, people who recovered from COVID-19 were younger, they changed their diet and lifestyle during the pandemic, were taking zinc supplements. Supplementation was used for both prevention and as adjuvant therapy, and people thought that supplementation helped both with the prevention and recovery.

**Picture 2. Have you changed the frequency of supplement intake compared to the period before the pandemic?**



## CONCLUSIONS

COVID-19 pandemic has increased supplementation practice with vitamin C, D, and zinc in Croatia and Bosnia and Herzegovina, regardless of their COVID-19 status. Importantly, people use supplements for prevention and as adjuvant therapy during the pandemic. Additional benefit noted was change in diet and lifestyle habits.