



EATING HABITS DURING THE COVID-19 PANDEMIC

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ABSTRACT

Purpose: The present study aimed to investigate eating habits and changes in them occurring during the COVID-19 pandemic, as well as cases after the disease. **Methods:** A survey was conducted among 64 people aged between 18 and 65 years, divided into five age groups. The survey was prepared and submitted for completion electronically through the Google Forms platform. The data were processed using Microsoft Excel 2020 and were presented by charts. **Results:** 78.1% of the respondents had COVID-19 and 21.9% did not suffer from the disease. 62.5% of the participants in the survey stated that they noticed changes in their eating habits during the disease, 25% had no changes, and 12.5% could not determine a noticeable difference in their eating behavior. As a consequence of the change in eating habits, there was a change in the weight of a significant percentage of respondents. 43.8% of them lost weight, 31.2% gained weight, and 25% - had no change. There was also a change in preferences for certain food groups during and after the disease. **Conclusions:** The COVID-19 disease affects eating habits. More in-depth research is needed to clarify the causes and mechanisms by which these processes take place.

Key words: eating habits, pandemic, COVID-19

INTRODUCTION

The coronavirus infection (COVID-19) is a severe acute respiratory syndrome caused by the coronavirus SARS 2 (SARS-CoV-2) (1). It is a global problem that retains its significance over time. It unfolds various areas and topics that concern people all over the world (2). Social isolation, as well as the disease itself, is a challenge in the daily life of modern man because it harms mental and physical health, as well as eating habits (3).

The COVID-19 pandemic is associated with the emergence of stressful conditions that can lead to a dramatic change in our eating habits. This could have a significant impact on health and the immune system, as a balanced diet is essential to cope with the infection (4, 5). The change in eating habits and lifestyle caused by the COVID-19 pandemic is also linked to changes in weight (6).

A study by Spanish scientists among the population shows that during the pandemic there is an increased consumption of unhealthy food. In addition, the physical activity is also reduced and this leads to serious health risks (7). Data from studies in the United Arab Emirates are similar. 31% reported gaining weight and 38.5% did not have regular physical activity. Lifestyle changes, including eating habits, lack of physical activity,

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and psychological problems (8). British scientists report a higher body mass index, reflecting the nutritional status of individuals during the pandemic. 59% of respondents report that they eat and overeat more often during quarantine (9). Among the Italian population, weight gain was observed in 48.6% of the population, taking into account that young people aged 18 to 30 eat healthier. About 15% of the respondents reported consuming organic products, fruits, and vegetables, as a result of which their BMI values were lower (10).

There is also evidence that some food habits have improved during the pandemic. One study found that the majority of the participants ate home-cooked meals daily during COVID-19 compared to previous periods (11).

The coronavirus infection is still a new and insufficiently studied disease. There is still no clear data on what the changes in eating habits are.

The present study aimed to examine the eating habits and the changes that occur during the COVID-19 pandemic.

MATERIAL AND METHODS

A survey was conducted among 64 people (34 women and 30 men) aged between 18 and 65 years. The survey was prepared and sent out online through the Google Forms platform. Respondents filled in an informed consent form. The survey was conducted anonymously. The data were processed using SPSS, version 25, and were represented by diagrams.

RESULTS AND DISCUSSION

Among the respondents, a significant part - 78.1%, had COVID-19 and only 21.9% did not experience the disease. 60.6% said they noticed changes in their eating habits during the COVID-19 pandemic and beyond. 27.3% did not report a difference in their eating behavior, and 12.1% could not determine (**Figure 1**).

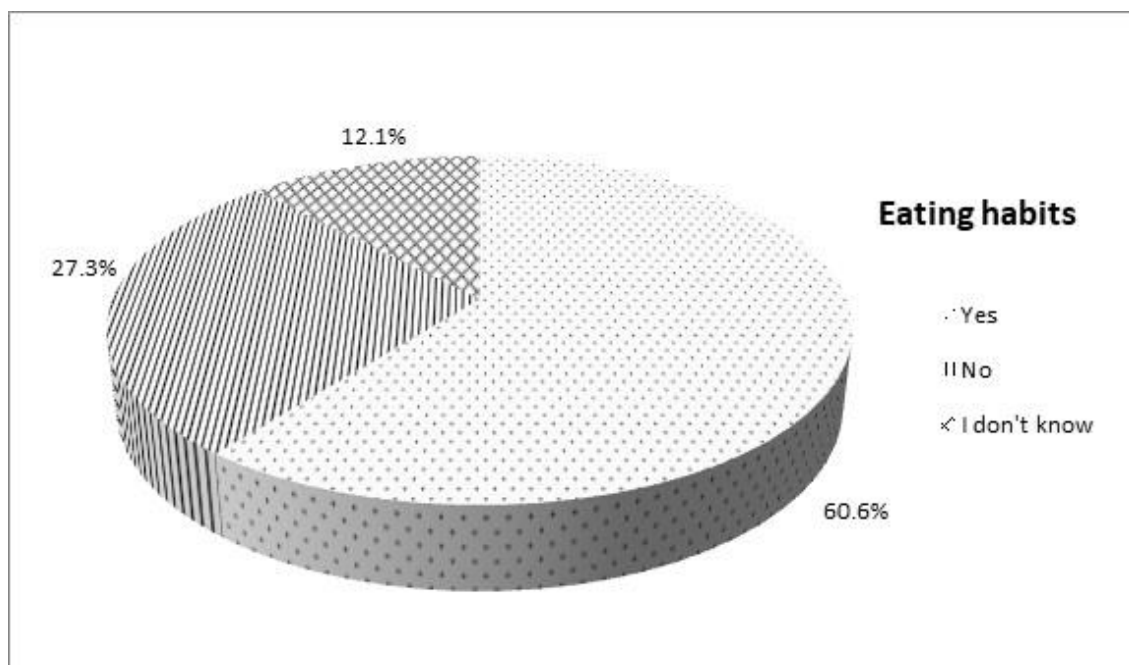


Figure 1. Changes in eating habits

The respondents were asked what food groups they preferred to consume during the COVID-19 pandemic. The highest percentage of preferences is observed for fruits and vegetables - 60.6%,

followed by milk and dairy products - 15.2%. Only 12.1% preferred pastry. The same is the percentage of those consuming meat and meat products (**Figure 2**).

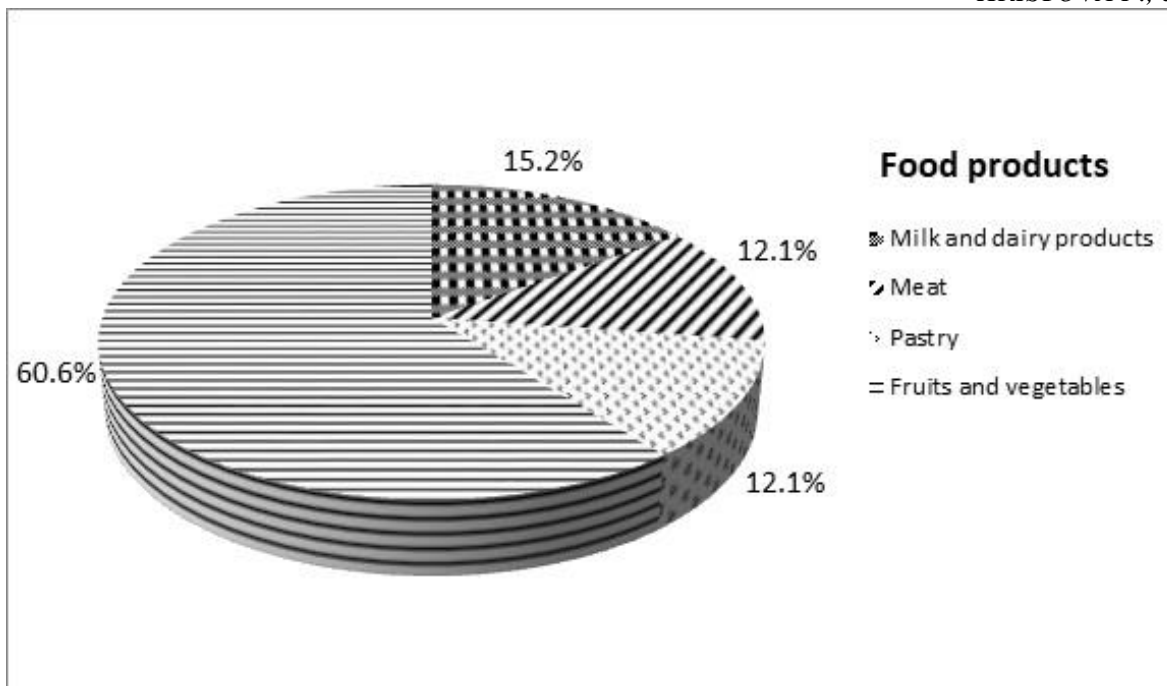


Figure 2. Food group preferences

Among the respondents, there was intolerance to certain food groups during the pandemic of COVID-19. The percentage of intolerance was highest to meat and meat products - 30.3%. The percentage of intolerance to pasta and confectionery was lower - 10.5%. The other participants did not notice changes in their eating habits.

Changes in the eating habits inevitably lead to a change in weight. 45.5% of the respondents reduced their weight during the quarantine, 30.3% gained weight, and 24.2% had no change (Figure 3).

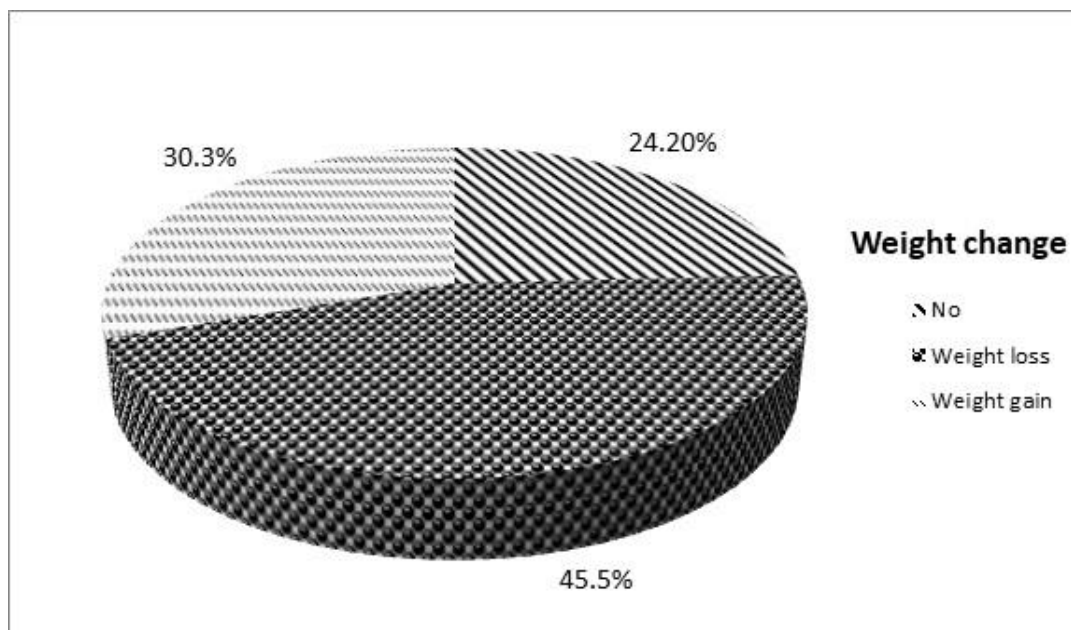


Figure 3. Weight change during quarantine

During the illness itself, a significant weight loss is observed. 51.6% of the respondents lost weight by up to 5 kg, and 12.9% by more than 5 kg. 25.8% had no change in their weight, and 9.7% had not noticed a change.

Extremely important for the eating behavior during the COVID-19 pandemic is the consumption of harmful foods from fast-food

restaurants such as pizza, burgers, popcorn, chips, etc. 69.7% of the respondents answered that they consumed such products, although it was rarely. 15.2% of the participants in the study consumed them 1-2 times a week, 9.1% - 3-4 times a week, and 6.1% - almost daily. These data showed that in conditions of social isolation, people often changed their eating habits to more unhealthy ones (Figure 4).

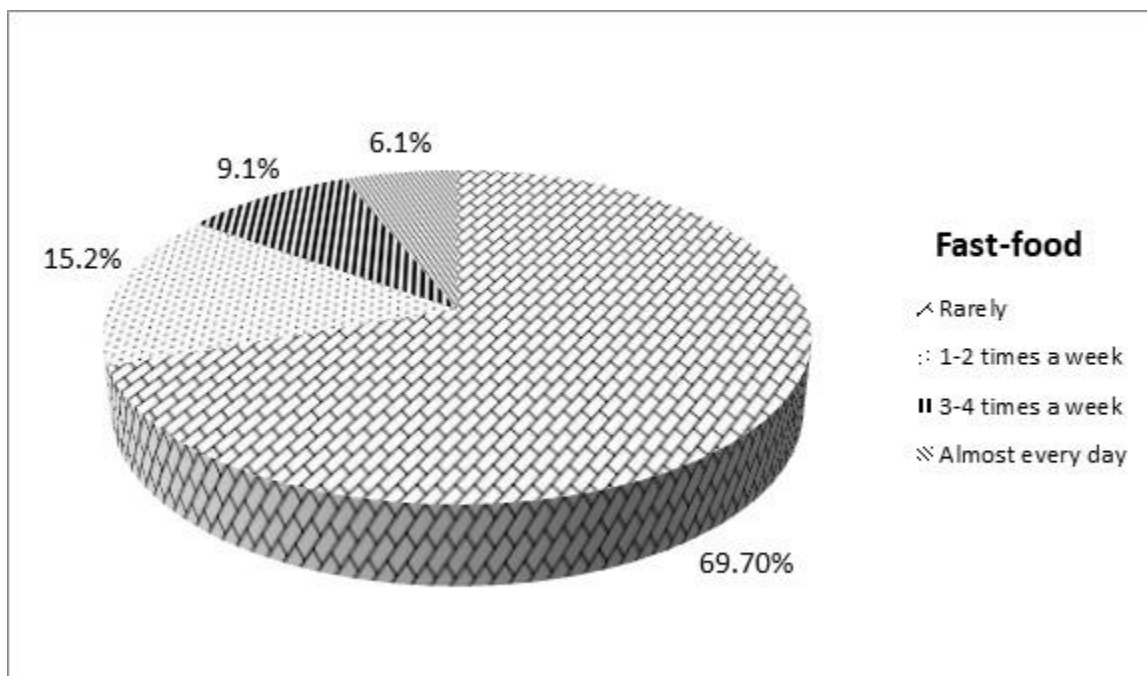


Figure 4. Frequency of consumption of fast-food

A review of data from the world literature showed that most people experience changes in their eating habits during the COVID-19 pandemic. The social isolation and a longer stay at home sometimes are prerequisites for healthy eating. Unfortunately, unhealthy foods turn out to be a more preferred choice. Along with this, however, the respondents reduce their physical activity (12, 13). Unhealthy eating combined with low physical activity puts public health at risk (14).

During the quarantine, a higher frequency of consumption of some foods is observed. According to Spanish scientists, the demand for fruits and vegetables has increased, thus improving health. The intake of others such as sweets and pasta has been reduced (15). Studies in Denmark, Germany, and Slovenia showed a change in the frequency of consumption of frozen and canned foods, pastries, and biscuits. The

reduced purchases of unhealthy foods such as confectionery and pasta aim to prevent weight gain (16). According to Polish scientists, there is also a preference for fruits and vegetables over other food groups (17). The results of these studies confirm our data.

There are hypotheses in the world literature that eating more vegetables and fruits reduces the incidence and mortality of COVID-19. This fact is explained by their preventive effect due to the high content of trace elements, fiber, and bioactive components (18-20). According to Yedjou et al. vegetables and fruits are promising chemopreventive agents in the fight against COVID-19 (21). These data are optimistic, as among the respondents in our study there is a tendency to increase consumption of fruits and vegetables. This can be explained by the desire to optimally cope with COVID-19.

However, during the pandemic, there is an increase in the consumption of harmful foods, especially in obese people. A study conducted in the United States found that the unhealthy eating during the COVID-19 pandemic was more prevalent in at-risk populations (22). Changes in the eating habits of the population during the pandemic inevitably lead to changes in weight. Chinese scientists reported that the average body mass index of all young people involved in their study has significantly increased. There was also an increased prevalence of overweight or obese students (23). According to other studies, weight gain during a pandemic is mainly due to increased total food intake and reduced physical activity (24). In addition to these data, a study by Spanish scientists expands the classic studies and claims that during quarantine, weight loss is often observed. It is often associated with the presence of depressive symptoms. This phenomenon is more common among men and younger individuals (25). Our study also shows a large percentage of people who have reduced their weight in the pandemic.

CONCLUSIONS

From the obtained results it can be concluded that the pandemic of COVID-19 influences the eating habits. There is an increased preference for the consumption of vegetables and fruits along with a reduced interest in meat, sweets, and pasta. Fast-food consumption remains a problem during the pandemic.

As a consequence of the change in the eating habits, there was also a change in the respondents' weight. A large percentage of them was characterized by weight loss, and in others - by weight gain.

It seems that more in-depth research is needed to examine the reasons for choosing different food groups during the pandemic. It could be effective to maintain a balanced diet and a good health.

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