

## **Covid-19 And Its Impacts On Students' Attitudes And Behaviours Related To Proper Nutrition, Alcohol Consumption, And Smoking.**

Robert Çitozi<sup>1</sup>, Ferdinand Mara<sup>1</sup>, Klajdi Xhebexhiu<sup>1</sup>, Henri Dibra<sup>1</sup>

<sup>1</sup>Faculty of Physical Activity and Recreation, Sports University of Tirana, Albania

**Correspondance:** rcitozi@ust.edu.al

### **Abstract**

Albania has experienced tremendous political, social, and economic transformation throughout the 1990s. Among these have been modifications to nutrition, both in terms of quantity and quality. Most people now live in better conditions thanks to the move in the political system towards a free-market economy, which also resulted in more cars on the road. As a result, there was a surge in both environmental pollution and population inactivity, which has been connected to obesity and overweight in all age categories. For children and young people, unhealthy eating habits and physical inactivity have the biggest effects. This study, which involves students from the Faculty of Physical Activity and Recreation practically every year, aimed to determine the prevalence of overweight and obesity, as well as alcohol and cigarette use, in first-year bachelor's students. The study's main goal was to determine whether the Corona virus epidemic had any influence on the results. 140 students were chosen at random between October and November 2021, with a mean age of 18.69 years (58.75% male and 41.42% female participants). The results indicate that some sports university students may benefit from studying a sports nutrition module as well as nutritional and health promotion programs to lessen this propensity, especially in male students, even though the general prevalence of overweight and obesity in the sample investigated is low. We believe that the rise in alcohol and cigarette use since the end of our previous study in 2019 is likely due to isolation during COVID-19, either out of boredom or to deal with tension and anxiety levels that have been reported to rise across the board in all demographic groups.

*Keywords:* Covid-19, Attitudes, Proper nutrition, Alcohol consumption, Smoking, Students.

## Introduction

The first two cases of the coronavirus, a father and a son who had traveled to Albania from Florence, Italy, were officially confirmed there on March 8, 2020. The government outlawed all ships and flights from northern Italy on the same day until April 3rd, 2020 (Troka et al., 2021). The unpleasant experience of being in quarantine can have an impact on a person's health since it involves loss of freedom, uncertainty about the presence of a disease, and boredom. As a result, the potential advantages of mandatory mass quarantine must be carefully evaluated against any potential long-term health risks, such as increased cardiovascular risk and mental illness. There was a significant amount of psychological anguish and disorder among individuals in the survey who had been confined.

Over a third of the world's population is currently affected by obesity and overweight (Stevens et al., 2012), both of which are complex, multifaceted, and generally preventable diseases (Rippe et al., 2014). According to estimates from (Kelly et al. 2008), 20% of adults worldwide will be obese and 38% of them will be overweight by the year 2030 if secular trends continue. For children and young people, unhealthy eating habits and physical inactivity have the biggest effects. One of the main responsibilities of health and education professionals is the promotion of healthy behaviors, particularly those connected to nutrition and physical activity (Schlessman et al., 2011). The health advantages of eating a Mediterranean-style diet have been supported by numerous studies (Dominguez et al., 2021).

In terms of the influence of trendy lifestyles, which are typically defined by health-risk behaviors, university students are a vulnerable demographic. These practices include low consumption of fruits and vegetables, diets heavy in fat and cholesterol, and other risky eating habits (Factores Sociales En Las Conductas Alimentarias De Estudiantes Universitarios, n.d.). Universities can be used strategically to encourage healthy behavior patterns and practical strategies for encouraging students to engage in more healthy behaviors (Rodriguez et al., 2013).

Frequent family dinners may enhance children's and young people's healthy development, according to a growing body of research (Fulkerson et al., 2014; Harrison et al., 2015; Skeer & Ballard, 2013). Families can cook and share healthful foods at family meals. According to (Berge et al., 2016; Fulkerson et al., 2009; Larson et al., 2006; Utter et al., 2013), children and young people who frequently have meals with their family report better nutrition and eating behaviors, such as eating more vegetables and less fast food.

Epidemiologic studies have repeatedly shown that light to moderate alcohol consumption is linked to lower risks of cardiovascular disease and overall mortality

(Beaglehole & Jackson, 1992; Zilkens & Puddey, 2003; Corrao et al., 2004; Reynolds et al., 2003). This association may be due to the positive effects of alcohol on blood lipids, particularly high-density lipoprotein cholesterol and clotting factors (Rimm et al., 1999). However, it is frequently found that the illness risks of heavy drinkers are only somewhat higher than, if not comparable to, those of nondrinkers. Heavy alcohol use is associated with increased risks of cardiovascular disease and all-cause mortality. Although there is now a wealth of epidemiologic evidence linking alcohol to a variety of diseases (Corrao et al., 2004), practically all cohort studies that have evaluated these connections have employed baseline alcohol intake measurements in their analyses.

Lower education levels, lower incomes, and lower occupational positions have all been connected to higher obesity prevalence (Singh et al., 2010). The bulk of medical expenses worldwide are related to obesity and overweight, which are significant risk factors for deaths that could have been avoided (Kjellberg et al., 2017). One of the most important things that can be modified to encourage good aging is an adequate diet (Dominguez et al., 2022).

The emphasis of nutrition research on health outcomes has shifted in recent decades from looking at the effects of individual nutrients and foods to looking at interactions between nutrients and foods in dietary patterns, taking into account the potential synergistic and/or antagonistic actions of foods

and nutrients when consumed simultaneously in a food pattern (Jacobs & Steffen, 2003; Jacobs & Tapsell, 2013). There have been major changes in both the global production and distribution of food from the middle of the 20th century to the present (Popkin, 2006; Whitmee et al., 2015).

The advances in crop yields and food production can help explain some of the decrease in hunger and increase in life expectancy (Steffen et al., 2015). However, the growth of unhealthy westernized dietary patterns, which include a lot of processed and ultra-processed food that is particularly heavy in calories and low in important nutrients, balances out these good impacts (Drewnowski, 2017). 'Low-nutrient-dense food' is the term now used to describe this kind of meal. The availability of low-nutrient meals worldwide and the continued acceleration of urbanization have also contributed to this trend (Vilar-Compte et al., 2021).

Chronic illness risk may be increased when poor lifestyle factors, including smoking, drinking, and inactivity, are combined with obesity. Nutritional information might thus serve as a deterrent against the trend toward fast food. Therefore, by promoting healthy eating practices, sports universities may have a substantial impact on lowering the prevalence of

obesity in the young population (Çitozi & Bozo, 2014). My colleagues and I have conducted this survey with first-year bachelor students every year since the establishment of the Faculty of Physical Activity and Recreation in 2010. Finding the averages for height, weight, BMI, eating patterns, and other behaviors among the youngest members of our staff is the goal.

The use of cigarettes and alcohol is another subject of investigation. Physical activity, food, sleep, smoking, drinking, and drug use are all actions that have a bearing on one's health (The World Health Report, 2002, Overview, 2002). Health-related behaviors include eating, drinking, using drugs, smoking, and sleeping (The World Health Report, 2002, Overview, 2002). University students have a high rate of tobacco smoking, which typically begins in youth and intensifies there, according to (Martínez-Hernández et al., 2012).

The results of the study allow us to compare the data to what is occurring in the other two faculties at our university, as well as to what it was like before and during the pandemic, in order to give our students the most accurate information we can about their eating and behavioral patterns each academic year and provide the best recommendations for improving the current situation.

## **Materials and Methods**

This study, which involves students from the Faculty of Physical Activity and Recreation practically every year, aimed to determine the prevalence of overweight and obesity, as well as alcohol and cigarette use, in first-year bachelor's students. The study's main goal was to determine whether the Corona virus epidemic had any influence on the results. A certified questionnaire with 11 questions has been used. The students were chosen at random, and before completing the questionnaire, they were given instructions on how to do it properly. 140 students in all took part in this study between October and November 2021, with a mean age of 18.69 years (58.75% male and 41.42% female participants).

## Results

### Characteristics of the students' sample and BMI values

Table 1 lists the traits of the students who participated. With a mean age of 18.69 years, a total of 140 students (82 males and 58 females) took part in this study. The participating students had average body weights of 66.07 kg and 1.71 cm, respectively. BMI on average was 22.43. Obesity is defined as having a body mass index (BMI) of 30 or higher. Grade 1 obesity is defined as having a BMI of less than 35, Grade 2 obesity is defined as having a BMI of 35 or higher but less than 40, and Grade 3 obesity is defined as having a BMI of 40 or higher (National Center for Health Statistics (US) Health et al., 2013).

**Table 1.**

*Characteristics of the participants*

<b>Variable</b>	<b>Total</b>	<b>Males</b>	<b>Females</b>
<b>Number of Students</b>	N = 140	N = 82	N = 58
<b>Age (years)</b>	18.69	18.72	18.66
<b>Weight (kg)</b>	66.07	72.36	59.79
<b>Height (cm)</b>	1.71	1.77	1.66
<b>BMI</b>	22.43	23.12	21.74

### Students' weight status based on BMI categories

The majority of the students (75%) were of normal weight (71.4% male students compared to 79.5% female students). The prevalence of overweight and obesity was not prevalent among male students compared to girls (24.2% and 13.7% vs. 3.5% and 2.1%, respectively) (Table 2). In comparison, 4.7% of female pupils were underweight as compared to 0.9% of males.

**Table 2.**

*Prevalence of obesity among students based on BMI by gender*

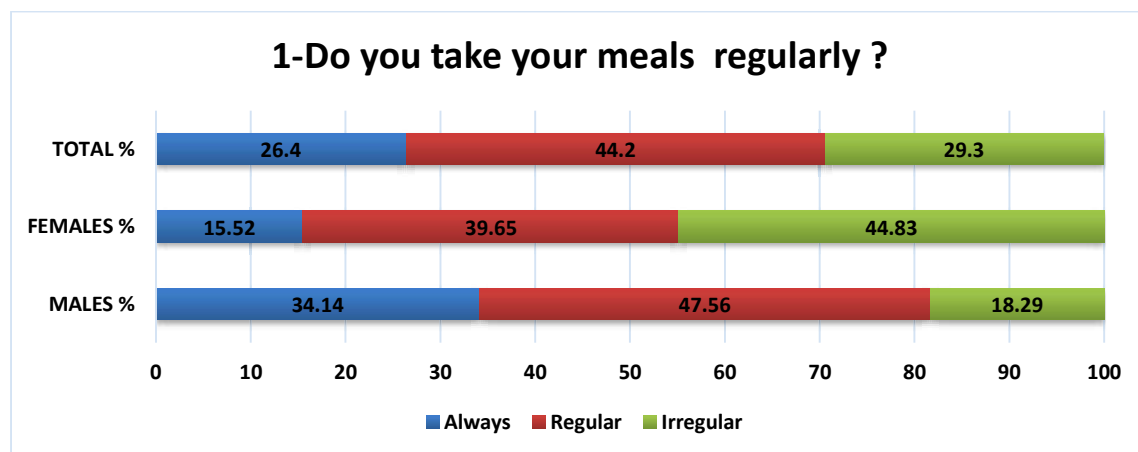
Weight Status	Males		Females		Total	
	<i>N</i> =	<i>Percentage</i>	<i>N</i> =	<i>Percentage</i>	<i>N</i> =	<i>Percentage</i>
<i>Underweight</i>	1	0.9	3	4.7	4	2.9
<i>Normal</i>	59	71.4	46	79.5	105	75.00
<i>Overweight</i>	20	24.2	8	13.7	28	20.00
<i>Obese</i>	2	3.5	1	2.1	3	2.1

### Students' eating habits

The majority of students (70.6 %) who reported eating meals always or frequently did so based on their eating habits. Despite the fact that the disparity between men and women in regular meal consumption is smaller, we find a substantial difference of 18.62 % in the disadvantage of women in constant meal intake. Women consumed meals less frequently (44.83%) than men (18.29 %), which is a difference of 26.54 % in their favour. Men also tend to eat more regularly than women their age, who are more focused on maintaining their weight and physical appearance. Figure 1.

**Figure 1**

*Question 1. Do you take your meals regularly?*



Male students reported healthier daily breakfast eating habits since 31.03% of female students reported eating breakfast daily compared to 35.36% of male students, and 18.96% of female students reported eating breakfast three or four times per week compared to 30.48% of



male students. If we consider breakfast to be the most crucial meal of the day, research shows that women eat breakfast 49.99% of the time and three or four times a week, while men eat 65.84% of the time, a difference of 15.85%. (Figure 2).

**Figure 2**

*Question 2. Do you take breakfast?*

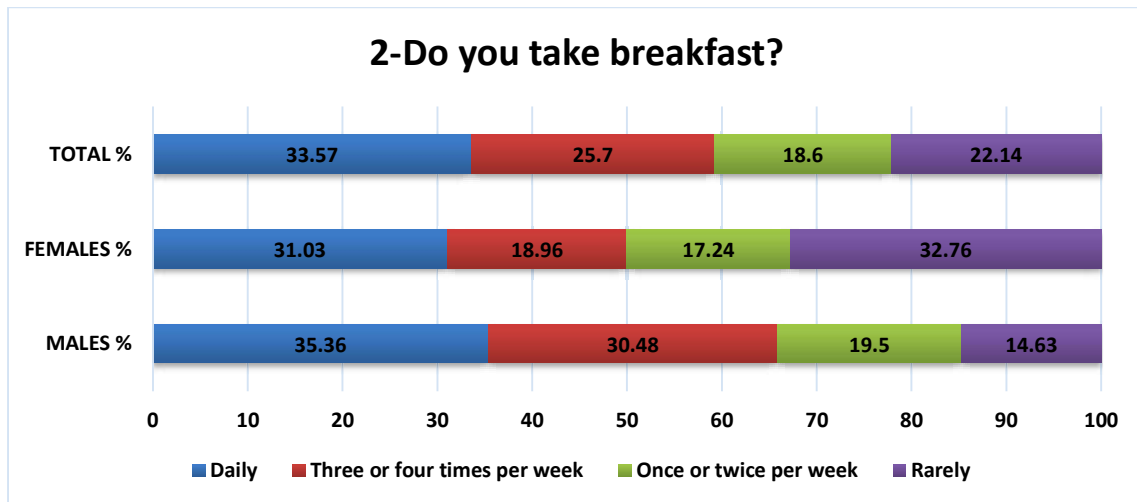


Figure 3 demonstrates that there are no appreciable differences between males and females in their daily intake of two or three meals. 77.90% of students who eat two or more meals a day consume a nutritious diet. The common lifestyle pattern is consuming three balanced meals (each around 600 calories or so), plus 1-3 snacks (of about 200 calories each) <https://nutritiouslife.com>. (Figure 3).

**Figure 3**

*Question 3. How many times do you eat meals except snacks?*

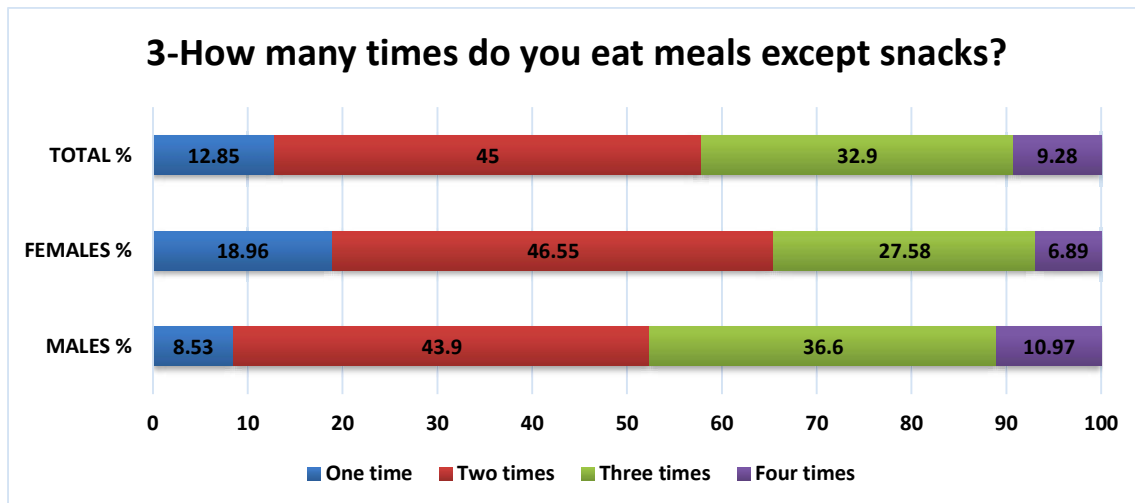
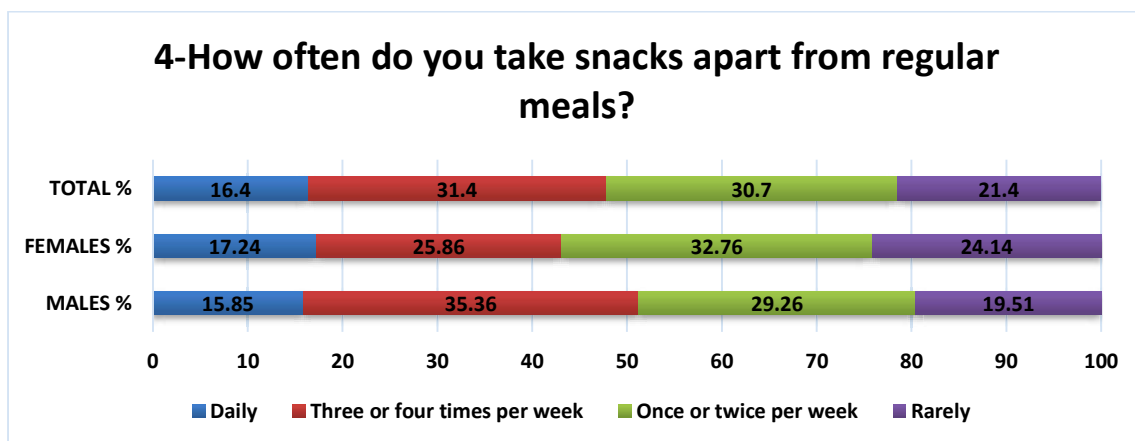


Figure 4 demonstrates that there are no appreciable differences in the intake of daily, three-times-weekly, or four-times-weekly snacks between genders. 47.80% of kids who eat snacks every day, three or four times per week, consume a healthy diet. Snacking is a popular strategy for managing hunger. One study found that eating less than three times daily is more likely to leave you hungry, so it's worth grabbing an apple or some nuts in between meals to see if that makes you feel less ravenous at the dinner table (Leidy & Campbell, 2011).

**Figure 4**

*Question 4. How often do you take snacks apart from regular meals?*

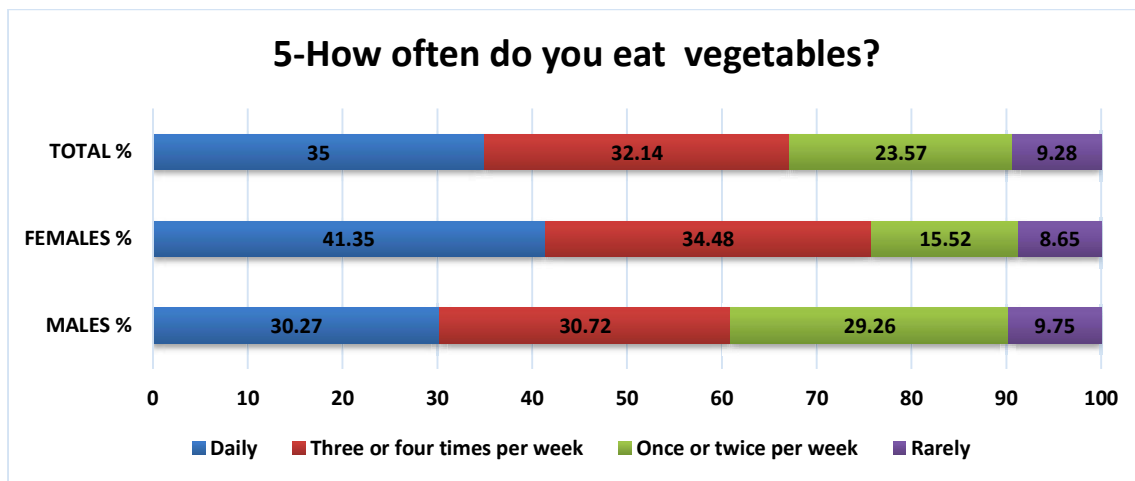


The daily intake of vegetables differed by gender by 11.08% (41.35% females vs. 30.27% males). The proportion of kids (67.14%) who consume veggies daily, three or four times per week, is within acceptable bounds. We think this has something to do with Albania, which is thought of as a prospective producer of fruits and vegetables because of its

environment. Additionally, cost reductions for the general public and students are made possible by large-scale production. Vegetables and fruits are low in calories and contain no cholesterol. They are also a great source of fibre and an incredible source of vitamins and minerals. Moreover, vegetables and fruits also prevent chronic diseases as they have the necessary vitamins, minerals, and fibre for humans (Drummond & Brefere, 2000). (Figure 5).

**Figure 5**

*Question 5. How often do you eat vegetables?*

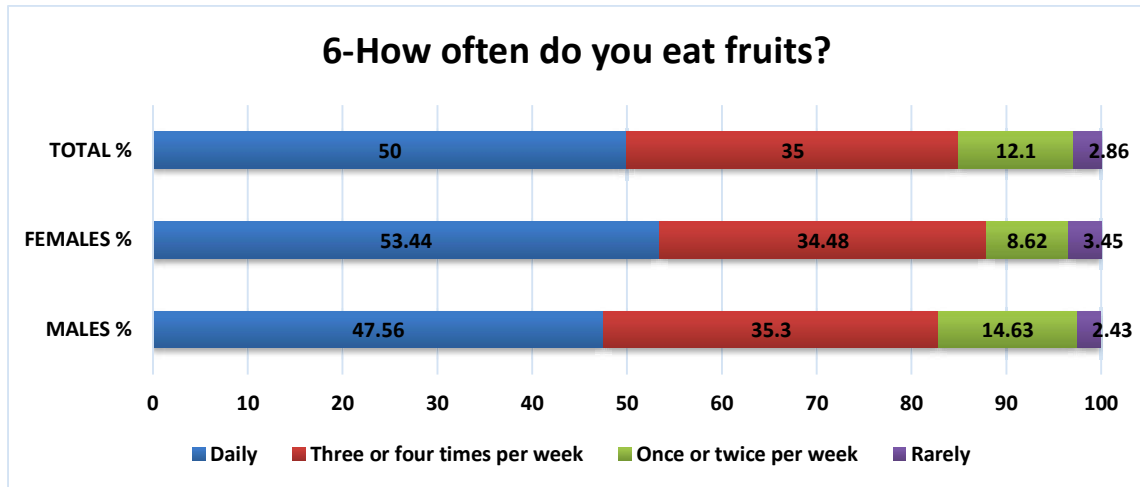


85% of kids consume fruits daily, three or four times per week, which is within recommended ranges. Fruit consumption is much greater than the average in Europe, with such a high percentage.

Apples, pears, plums, citrus fruits, watermelons, and other fruits are abundant in Albania. Consuming fruit helps pupils meet their daily requirements for fibre, as shown in Figure 6.

**Figure 6**

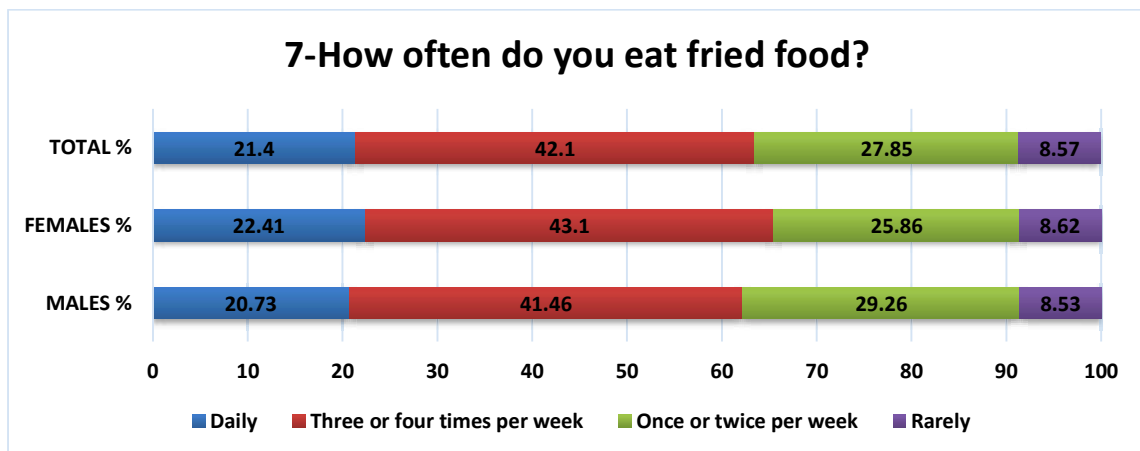
*Question 6. How often do you eat fruits?*



Students around the world struggle with a variety of difficulties, including excessive fast food consumption. The issue is made worse by the large number of students who live in dorms or rented apartments. The average daily consumption of fried food is considerable (63.5%, or three to four times per week), and this needs to change. Many people like the taste of fried foods. But these foods tend to be high in calories and trans fat, so eating a lot of them can negatively affect your health. (Figure 7).

**Figure 7**

*Question 7. How often do you eat fried food?*

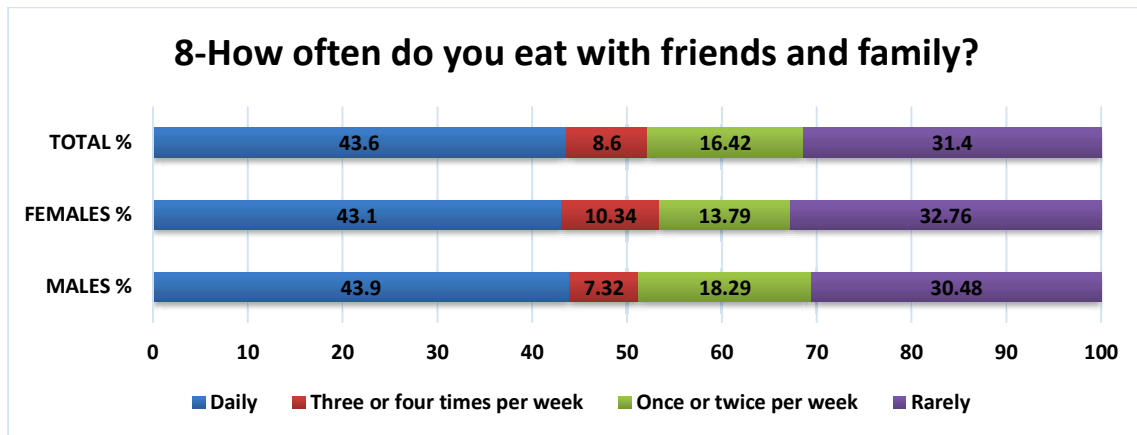


When you share a meal with others, you will not only gain personal advantages but also strengthen your community. Yes, eating with friends and family is proven to deepen ties within the community and create lasting friendships. Adults often choose healthier foods when dining

with others, according to studies. 43.6 % of students eat with friends and family, which suggests that they consume a wholesome diet. It's important to note the wholesome food our mothers prepare. Figure 8).

**Figure 8**

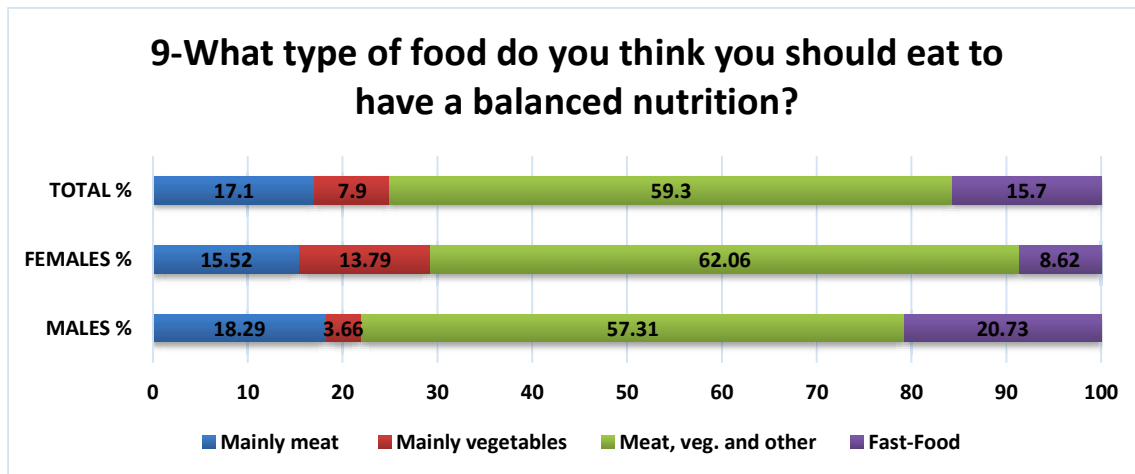
*Question 8. How often do you eat with friends and family?*



A balanced diet is one that includes a variety of foods in the right amounts and ratios to meet the body's needs for calories, proteins, minerals, vitamins, and other nutrients. A small portion of the diet is also set aside for extra nutrients to last through the brief period of leanness. A healthy diet should also contain bioactive phytochemicals, such as dietary fibre, antioxidants, which have beneficial effects on health. Nearly 60 % of students eat a variety of foods, which suggests that they are knowledgeable about healthy eating. Eating a well-balanced diet means eating a variety of foods from each of the 5 food groups daily, in the recommended amounts. (Figure 9).

**Figure 9**

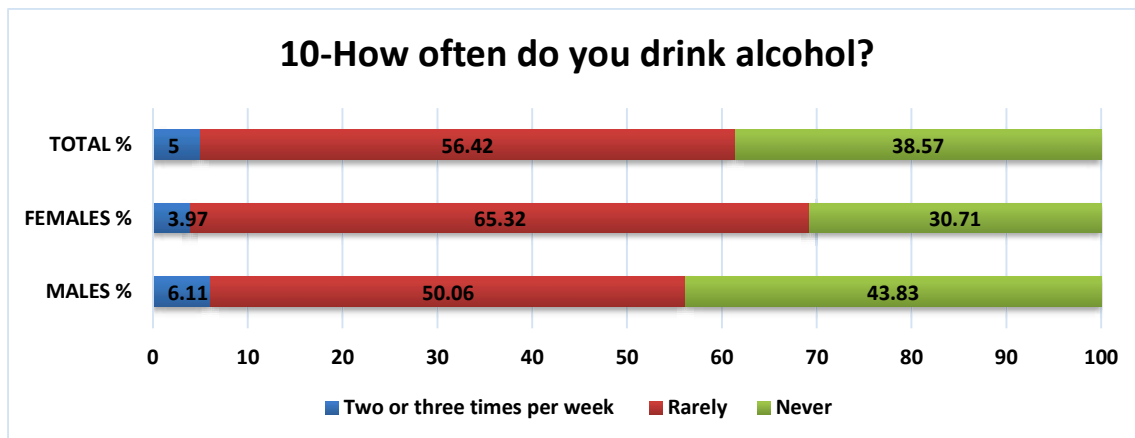
*Question 9. What type of food do you think you should eat to have a balanced nutrition?*



Male students (6.11 %) and female students (3.97 %) both reported drinking alcohol more frequently (2 or 3 times a week). Compared to men (50.06 %), more female students said they drank alcohol infrequently (65.32 %). A very positive sign for athletes is that over 90 % of students either never drink or only sometimes do. (Figure 10).

**Figure 10**

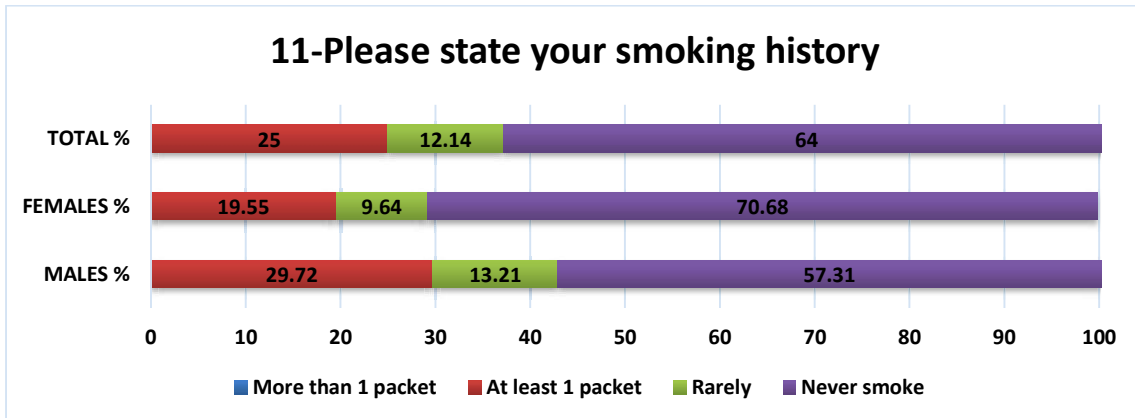
*Question 10. How often do you drink alcohol?*



About 64 % of our students never smoked, with 13.21 % of men and 9.64 % of women reporting occasional use. Compared to 19.55 % of female students, 29.72 % of male students smoked at least one packet of cigarettes. The objective of sports students to promote physical exercise for health is demonstrated positively by the statistic that 64 % of students never smoke. (Figure 11).

**Figure 11**

*Question 11. Please state your smoking history.*



## **Discussions**

The results indicate that some sports university students may benefit from studying a sports nutrition module as well as nutritional and health promotion programs to lessen this propensity, especially in male students, even though the general prevalence of overweight and obesity in the sample investigated is low. Two of the biggest factors in the burden of disease around the world are excess body weight and severe alcohol use (Organization, 2009). We believe that the rise in alcohol and cigarette use since the end of our previous study in 2019 is likely due to isolation during COVID-19, either out of boredom or to deal with tension and anxiety levels that have been reported to rise across the board in all demographic groups. As a result, during the pandemic, children and adolescents are more susceptible to gaining weight, losing immunity, and becoming infectious during the third wave of COVID-19 due to a combination of junk food, physical inactivity, and ongoing psychological stressors (S et al., 2021).

Universities can be used strategically to encourage healthy behavior patterns and practical strategies for encouraging students to engage in more healthy behaviors (Rodriguez et al., 2013).

## **Conclusions**

The majority of Albanians students did not alter their health habits when the 2020 Corona limitations were in effect. The majority of students who made changes increased their smoking while decreasing their alcohol intake and physical exercise. In this situation, public health initiatives should concentrate on younger and lower socioeconomic-status populations, for example, by providing often online courses. Pre-university education, but especially the university, should play a crucial role in this area.

## **Author contributions**

Professors Robert Çitozi and Ferdinand Mara created the investigation tool, processed and analysed the data, wrote the text of the manuscript, and gave their approval to the final version that was presented. The process of weight and height measurements, as well as the proper completion of the questionnaires by the students, were assisted by MSc. Klajdi Xhebexhiu and MSc. Henri Dibra.

## **Disclosure statement**

No potential conflict of interest were reported by the authors



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