Nutrition as an essential element in the prevention and treatment of health pathologies

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Abstract

The aim of this study is to analyze the impact of nutrition on the prevention and treatment of chronic diseases among the adult Albanian population. The study included 100 individuals aged 35–85, randomly selected from two health centers, one urban and one rural, in the Durrës region. The methodology used was cross-sectional and descriptive, combining physical examination with a structured self-administered questionnaire. The results showed that 27% of women were underweight, while the majority of the population had unhealthy eating habits, with high consumption of sugars, fried foods, alcohol, and tobacco. A significant correlation was identified between nutritional status, socio-demographic factors, and the occurrence of chronic pathologies. The study concludes that malnutrition continues to be an important determinant of health risk in Albania. It recommends structured interventions for nutritional education, the promotion of balanced diets, and strengthening the role of primary care in prevention.

***Keywords**: Nutrition, lifestyle, chronic diseases, nutritional status, prevention, public health.*

Introduction

Malnutrition and unhealthy lifestyle patterns today represent one of the greatest challenges to global public health. In recent decades, socio-economic changes, urbanization, and the increased consumption of processed foods have led to rising prevalence of obesity, diabetes, cardiovascular diseases, and other chronic conditions. Similar trends are observed in Albania, where the dietary behaviors of the population are often characterized by high caloric intake, saturated fats, and sugars, along with low levels of physical activity. Nutrition plays a central role in the prevention and management of these non-communicable diseases, directly influencing metabolic and cardiovascular health as well as the functioning of other bodily systems. Understanding the dietary habits of the Albanian population and their relationship to health status is essential for developing effective public health policies.

Literature Review

Nutrition, as a multidisciplinary science, aims to identify the role of nutrients in the functioning of the human organism and their impact on long-term health. International evidence shows that diets rich in fruits, vegetables, fiber, and whole grains have a protective effect against chronic diseases, whereas excessive consumption of sugars, trans fats, and processed foods is strongly associated with increased risk of obesity, dyslipidemia, diabetes, and cardiovascular pathologies. Studies by the World Health Organization emphasize that over 60% of global deaths are linked to lifestyle-related chronic diseases, in which nutrition is a direct influencing factor.

Modern dietary patterns have significantly reduced the intake of fresh foods and increased consumption of salt, saturated fats, and calories, especially in middle-income countries.

In Albania, studies on nutrition are limited, but data from INSTAT show an increase in cases of obesity, diabetes, and hypertension over recent decades. This highlights the need for new studies addressing the relationship between nutrition and population health.

Method

Type of study

Cross-sectional, descriptive, and analytical.

Study population

100 individuals aged 35–85, randomly selected from Health Center No. 1 (urban) and Arapaj 1 Health Center (rural) in the Durrës district.

Data collection instruments

- Physical examination (weight, height, BMI)
- Structured self-administered questionnaire on:
  - dietary habits
  - physical activity
  - health history
  - socio-economic status
  - disease history

Data analysis

- Descriptive statistics
- Comparisons by age group, gender, education, and economic income
- Analytical interpretation of the relationship between nutritional status and pathologies

Results

TABLE 1: Statistical data on the age of the study population

Nr. of Population	100	Nr. of Population	100
Average	60,41	Minimum	35
Median	60,00	Maximum	85
Moda	60	Standard error of the mean	2,081666
The standard deviation	14,8660687		

TABLE 2: Statistical data on BMI of the study population by gender.

Descriptive statistics, Gender=Female

	Nr.	Minimum	Maximum	Average	Standard of deviation
BMI	58	17.51	37.46	21.55	4.890
Weight (kg)	58	50.03	106.98	59.19	12.121
Height (cm)	58	155	169	166	3.31

Descriptive statistics, Gender= Male

	Nr.	Minimum	Maximum	Average	Standard of deviation
BMI	42	18.40	42.87	30.08	6.001
Weight (kg)	42	56.35	128.55	89.79	17.221
Height (cm)	42	170	185	174	3.402

As shown in our study population of 100 individuals, the mean age and the median are approximately equal, while the standard deviation, SD = 14.8660687, is relatively high, indicating that the study population is distributed over a wider range. This can also be observed in Table 1.

Furthermore, it is evident that females (BMI = 21.55 ± 4.890) have a lower BMI compared to males (BMI = 30.08 ± 6.001). The average height for females is 166 ± 3.31 cm, whereas for males it is 174 ± 3.402 cm. Regarding weight, males have an average weight of 87.79 ± 17.221 kg, compared to females with 59.19 ± 12.121 kg.

CHART 1: Distribution by age group (within the adult population 35-85 years old based on a difference of 10 years)

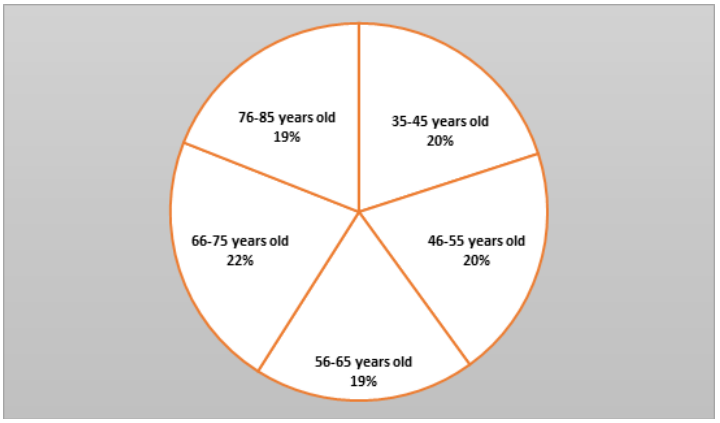


CHART 2: Distribution by gender (a female dominance of 58%) is seen

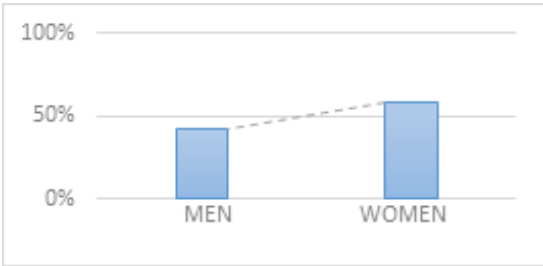


CHART 3: Distribution by residence (we have an equal distribution of subjects, both in rural and urban areas)

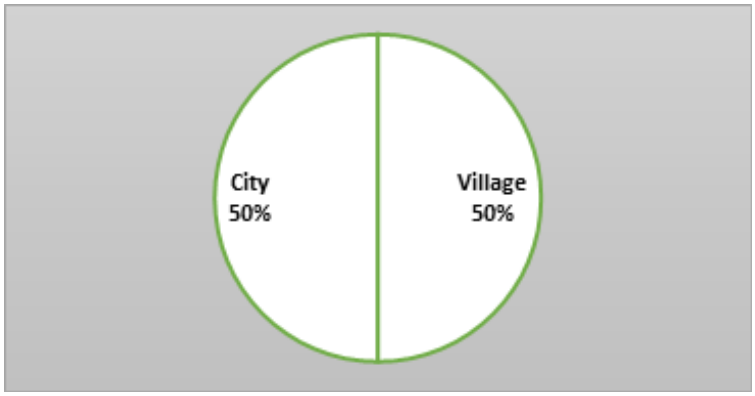


CHART 4: Distribution by level of education (in our population, a predominance of secondary education is observed with about 26%)

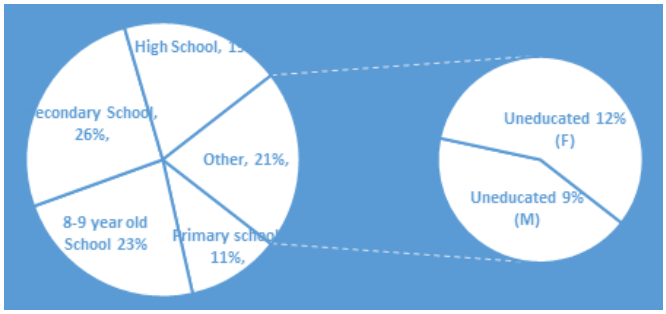


CHART 5: Distribution by marital status (highest participation of individuals with married civil status, worth around 59%)

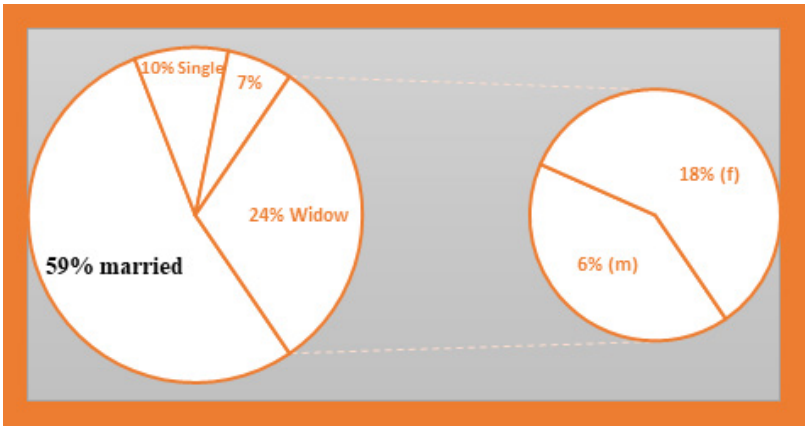


CHART 6: Distribution by employment status

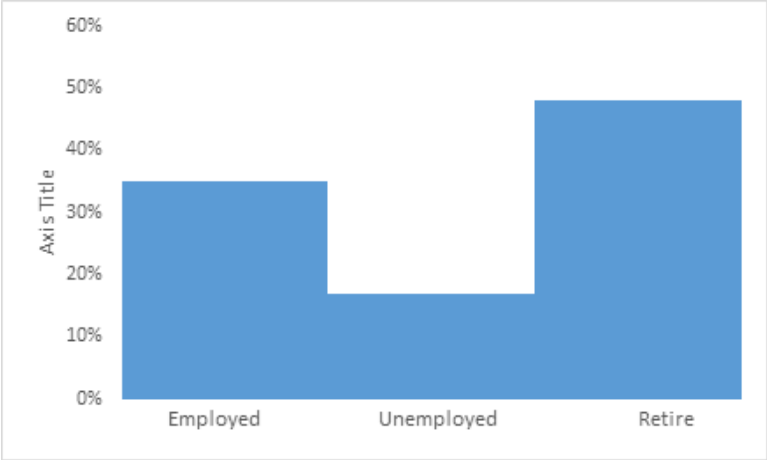
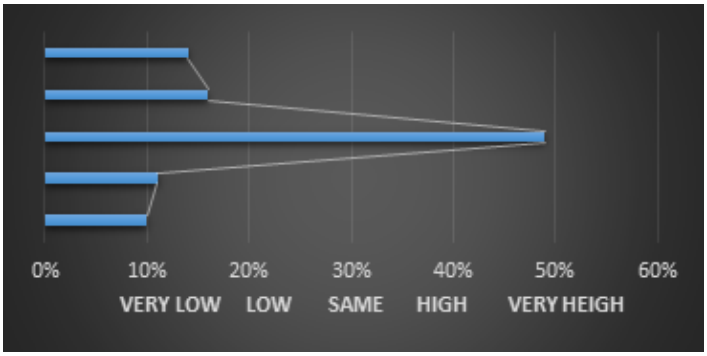


CHART 7: Distribution by economic income (compared to the average household economic income in Albania)



Based on the graphs, we can conclude that the majority of the study population is retired, approximately 48%. On the other hand, judging again from the graphical data, we can state that the study population generally has an average (moderate) income level, around 49%.

CHART 8: Regardless of the presence or absence of any disease, how is your overall health?

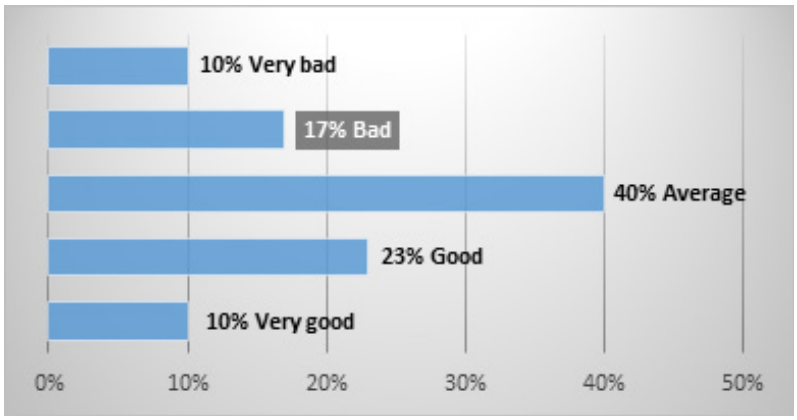


CHART 9: Have you used medications recently or have you used them before?

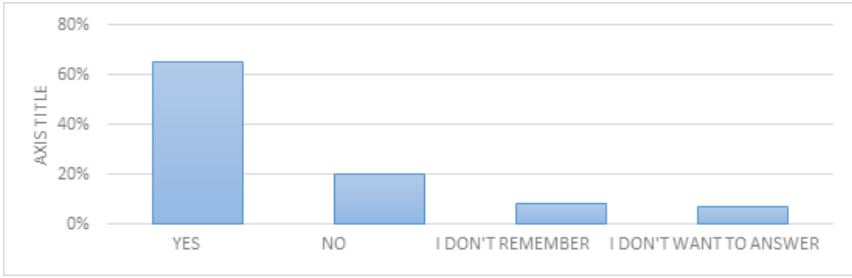


CHART 10: How often do you make a routine visit to your health center?

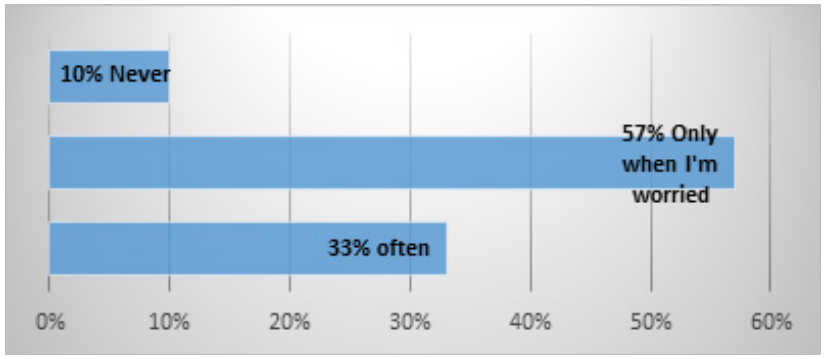


CHART 11: Number of visits to health centers, ambulances and polyclinics

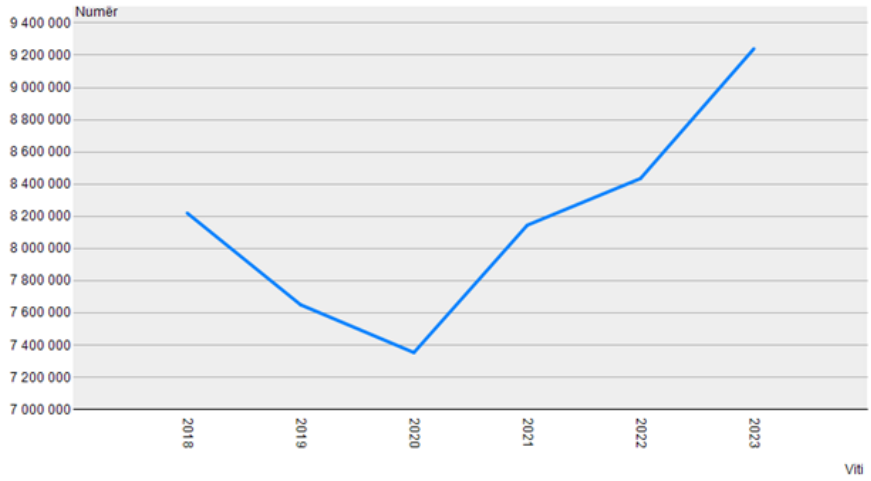
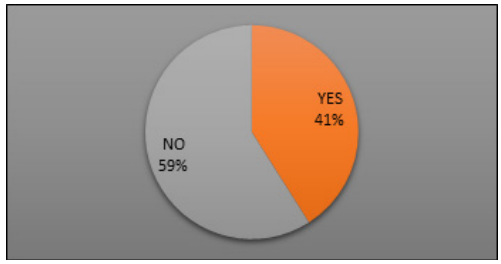


CHART 12: Do you do physical activity?



Assessment of different body systems affected by diet

CHART 13: Distribution of GI system diseases

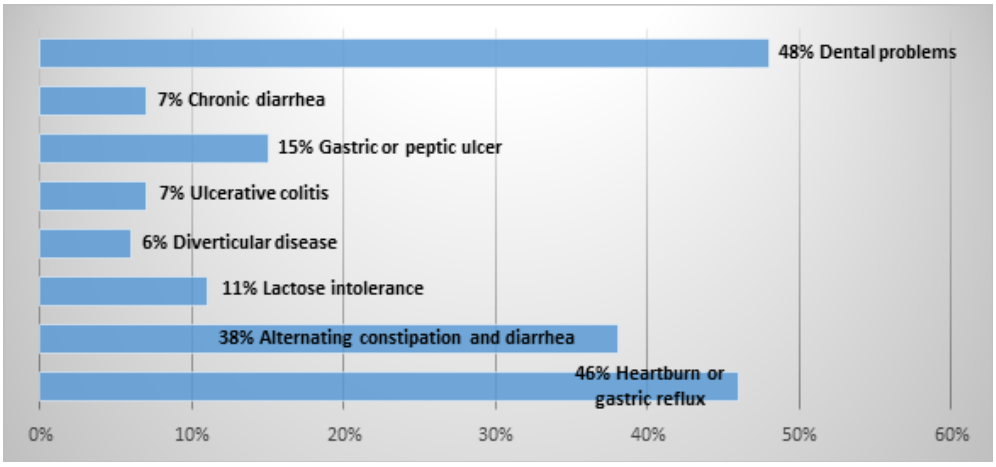


CHART 14: Distribution of diseases of the hepatic/pancreatic system

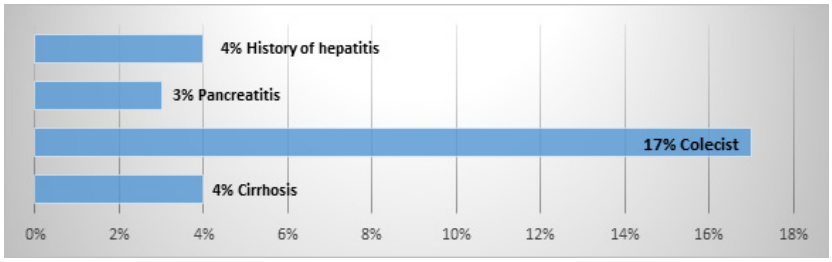


CHART 15: Distribution of diseases of the musculoskeletal system

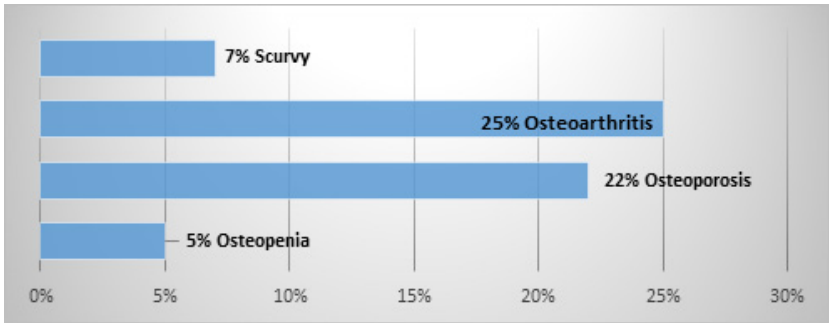


CHART 16: Distribution of metabolic/endocrine system diseases

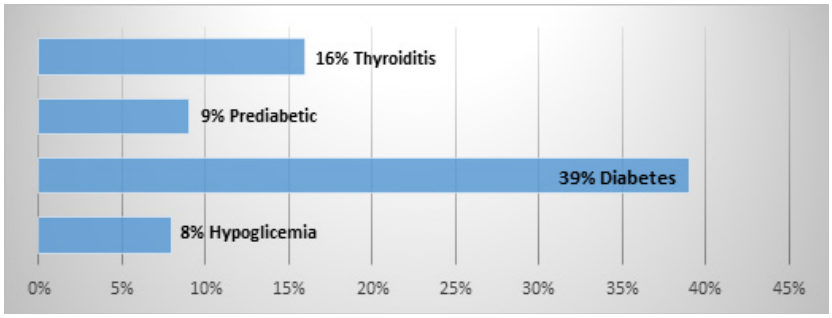


CHART 17: Distribution of diseases of the CVD system

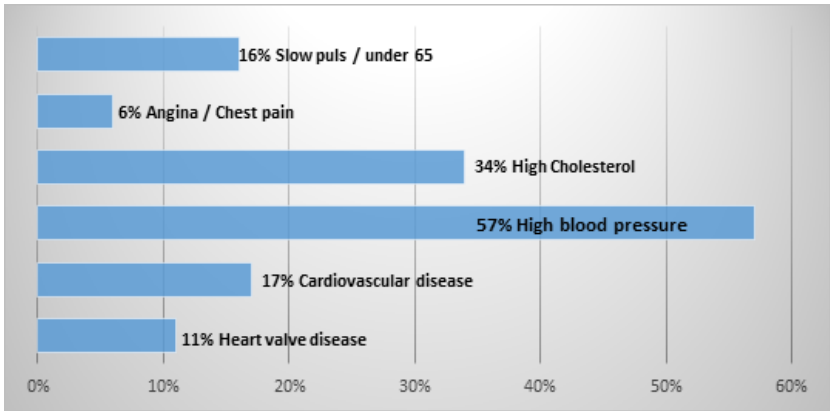


CHART 18: Distribution of diseases of the hematological / blood system

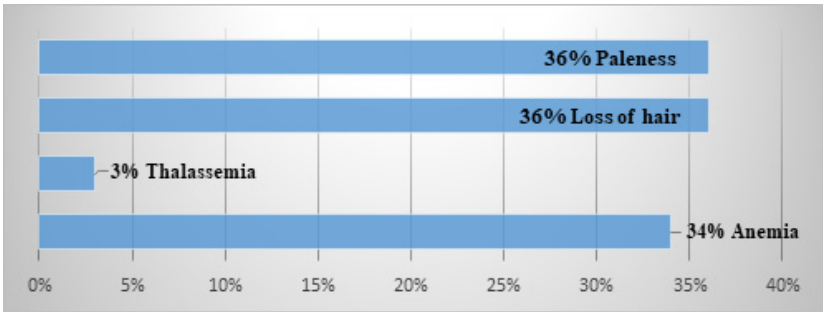


CHART 19: Distribution of urinary/renal system diseases

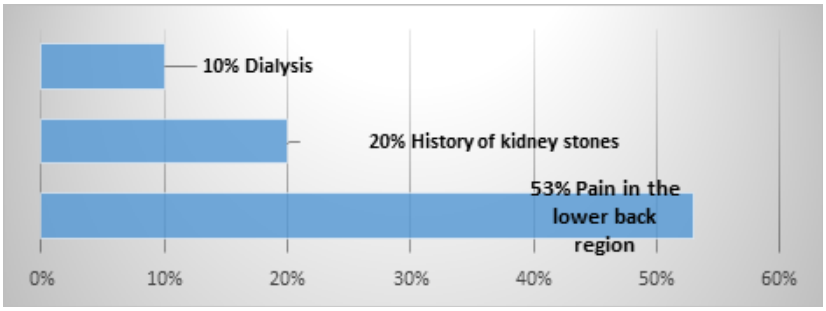


CHART 20: Distribution of neurological system diseases

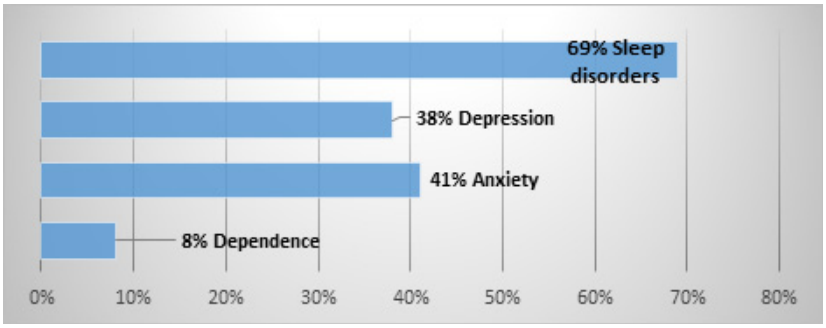


CHART 21: Eating disorders

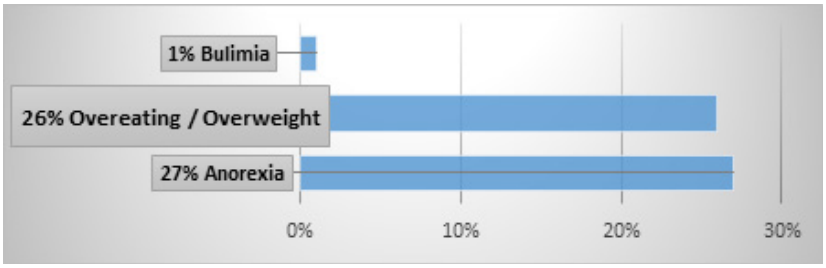
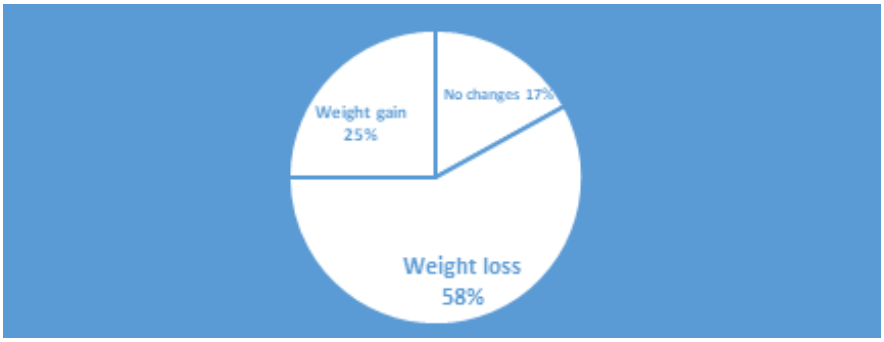


CHART 22: How has the COVID-19 pandemic affected your diet?



Nutrition History

CHART 23: Have you ever received information about nutrition?

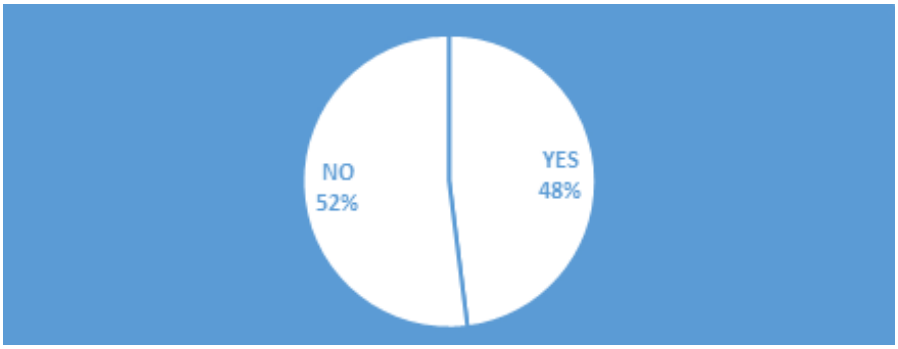


CHART 24: Do you think you eat healthily?

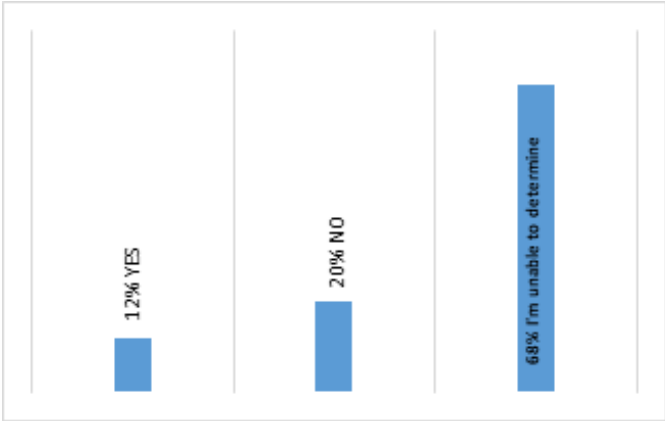


CHART 25: How do you classify your eating habits?

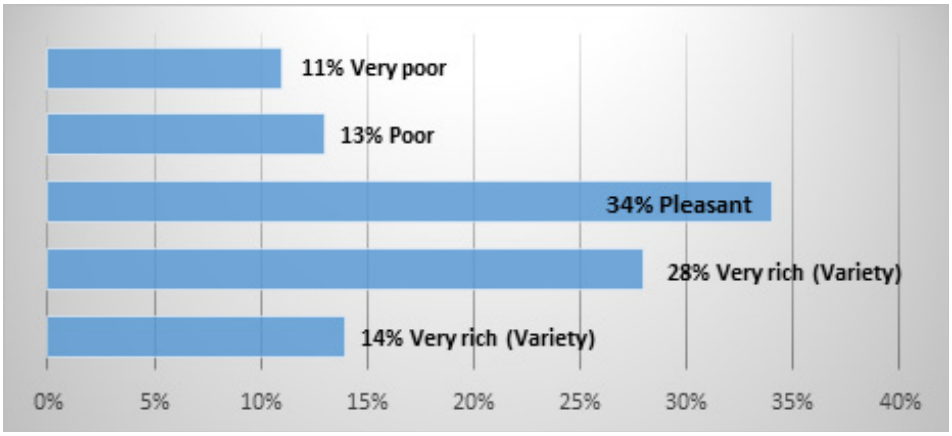


CHART 26: Have you made any changes to your eating habits due to your health?

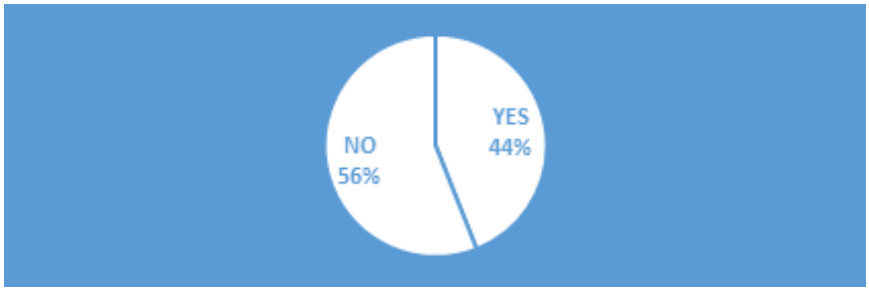


CHART 27: Have you had a recent history of weight loss or weight gain?

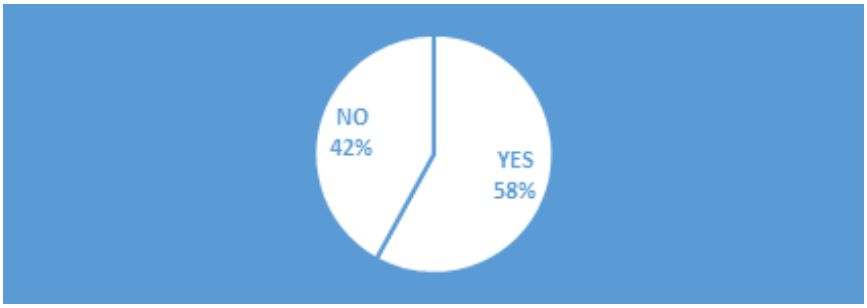


CHART 28: Distribution by consumption of fats, pastries, fruits, vegetables and salt

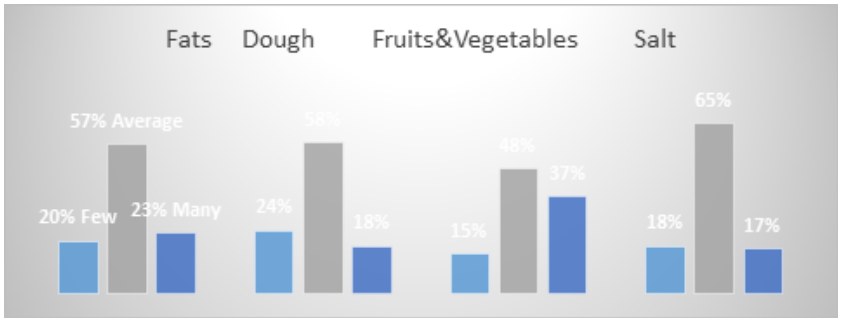


TABLE 3: Statistical data for grouped BMI

Gender	Underweight (BMI<=18.5)	Normal weight (18.5<BMI<=24.9)	Overweight (24.9<BMI<=29.9)	Preobesity (24.9<BMI<=34.9)	Obesity (BMI>34,9)
M	1%	7%	17%	7%	10%
F	26%	20%	7%	4%	1%

TABLE 4: Nutritional status & gender

Nutritional Status	The percentage
Underweight (BMI<=18.5)	
Normal weight (18.5<BMI<=24.9)	
Overweight (24.9<BMI<=29.9)	
Preobesity (24.9<BMI<=34.9)	
Obesity (BMI>34.9)	
Total	100%

TABLE 5: Nutritional status & education

Education	Underweight (BMI<=18.5)	Normal weight (18.5<BMI<=24.9)	Overweight (24.9<BMI<=29.9)	Preobesity (24.9<BMI<=34.9)	Obesity (BMI>34.9)
Primary school	4%	2%	3%	1%	1%
8-9 year old school	7%	8%	3%	3%	2%
Secondary school	7%	4%	14%	1%	0%
High School	3%	6%	2%	3%	5%
Uneducated	6%	7%	2%	3%	3%

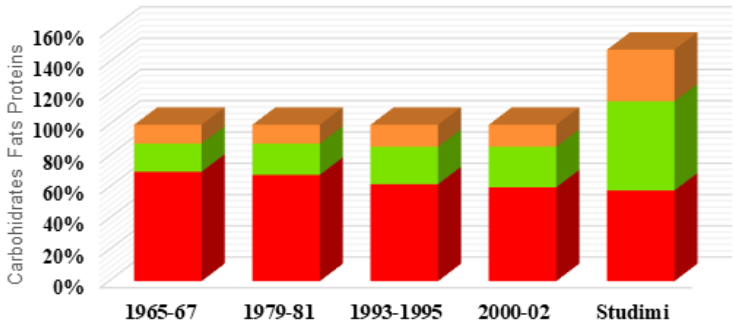
TABLE 6: Nutritional status & economic income

Economic Income	Underweight (BMI<=18.5)	Normal weight (18.5<BMI<=24.9)	Overweight (24.9<BMI<=29.9)	Preobesity (24.9<BMI<=34.9)	Obesity (BMI>34.9)
Very low	3%	5%	1%	1%	3%
Low	5%	6%	5%	1%	0%
Same	13%	11%	8%	7%	8%
High	4%	2%	5%	1%	0%
Very high	2%	3%	5%	1%	0%

TABLE 7: Distribution of major body systems based on age groups

	35-45 vjeç	46-55 vjeç	56-65 vjeç	66-75 vjeç	76-85 vjeç
SYSTEM GASTRO-INTESTINAL	16%	27%	4%	43%	52%
HEPATIC/PANCREATIC SYSTEM	0%	4%	6%	8%	10%
SYSTEM MUSCULO-SKELETAL	4%	12%	12%	15%	16%
METABOLIC/ENDOCRINE SYSTEM	11%	14%	14%	17%	18%
CARDIOVASCULAR SYSTEM	14%	22%	27%	38%	40%
URINARY/RENAL SYSTEM	1%	17%	16%	19%	21%

CHART 29: Distribution of protein, fat and carbohydrate intake in the Albanian population vs. our study population



Discussion

The findings of the study clearly show that dietary habits and nutritional status directly influence the health of the adult population. The high prevalence of unhealthy eating behaviors, particularly the elevated consumption of fried foods and sugars, represents a major risk factor for the development of chronic diseases in the studied sample.

Differences between genders (higher underweight prevalence among females and overweight among males) suggest that health interventions should be personalized according to gender and socio-demographic factors.

Compared to international literature, the results align with global WHO trends, which identify malnutrition as an important risk factor for non-communicable diseases. Another important observation is the low level of readiness among the population to change dietary behaviors, which complicates the implementation of preventive programs.

Conclusions

- The studied population shows a high prevalence of unhealthy dietary habits.
- There is a clear relationship between nutritional status, socio-demographic factors, and the occurrence of chronic pathologies.
- Males show a higher prevalence of overweight/obesity, while females more frequently present underweight.
- Cardiovascular and metabolic diseases are directly linked to dietary patterns.
- The low level of readiness for behavioral change calls for new health education strategies.

Recommendations

- Reduce the consumption of sugars, saturated fats, and salt (<5 g/day).
- Increase the intake of fruits and vegetables (≥400 g/day).
- Promote regular physical activity.
- Provide continuous nutritional education at the community level.
- Integrate nutritional counseling into primary health care.
- Focus on vulnerable groups: the elderly, low-income individuals, and people with chronic diseases

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