

# The Role of Health Education in Healthy Eating Habits During the Quarantine from the COVID-19 Pandemic in Albania

Brunilda SUBASHI<sup>1</sup>

<sup>1</sup>Scientific Research Center in Public Health, Faculty of Public Health, University of Vlora "Ismail Qemali", Vlora, Albania,  
[brunilda.subashi@univlora.edu.al](mailto:brunilda.subashi@univlora.edu.al)

**Abstract: Introduction:** Health education is the strongest tool we have, because through it, it is possible to build a new positive relationship towards knowledge and food habits and also prevent potential health problems and chronic diseases related to nutrition.

**Purpose:** Evaluation of the role of health education in Albania, through the comparison of healthy eating habits before and after health education.

**Methods:** This is a Comparative Effectiveness Research, conducted in Albania, predominantly in the City of Vlora, during May-July 2020, using AFQPHALS, a survey that was distributed through social media, and was completed by 545 adult subjects.

**Results:** The City of Vlora constitutes 55% of the sample; women were 75%, and aged  $30 \pm 11.5$  years.

Regarding the comparison of the studies before and after the education, it turned out that after the health education on healthy nutrition, the percentage of all food groups increased consumption of: 4 meals from 19% to 36%; breakfast every day from 50% to 90%; dinner every day from 43% to 66%; homemade food 7 or more servings per week from 45% to 56%; 3 servings of fruit per day from 13% to 15%; 2 servings of vegetables per day from 17% to 28%; drink water or liquids 4 or more glasses per day from 46% to 60%. The consumption of meat, fish, eggs, dairy products and cereals has also increased.

**Conclusions:** Health education on healthy nutrition has had a positive impact on improving knowledge and food habits in the community for a short period of time.

**Keywords:** *health education, food habits, quarantine, COVID-19, Albania.*

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## **1. Introduction**

Health education has become one of the most important factors in raising society's awareness of health problems, common diseases and their prevention (Przybylska et al., 2014) This education involves providing people with knowledge about nutrition and the importance of consuming a balanced diet that includes plenty of fruits, vegetables, whole grains, lean proteins, and healthy fats (Galiana-Sánchez et al., 2022).

Health education plays a crucial role in promoting healthy eating habits and preventing chronic diseases related to poor diets, such as obesity, heart disease, and diabetes (Mendonça& Lopes, 2012)

Health education is a combination of educational strategies that promote the voluntary adoption of healthy lifestyle choices and healthy eating behaviors (Arora et al., 2017).

By emphasizing the benefits of healthy eating, such as maintaining a healthy weight, reducing the risk of chronic diseases, improving energy levels, and enhancing overall well-being, health education can motivate individuals to adopt healthier eating habits (Moriyani & Meena, 2022).

Eating a variety of foods and less salt, sugar, and saturated and industrially produced trans fats is essential to a healthy diet (World Health Organization, 2020).

Nutrition education can save lives: experts agree that nutrition interventions are successful in preventing and treating lifestyle-related diseases such as type 2 diabetes, cardiovascular disease, obesity, and some cancers (HealthDirect, 2022).

The Albanian community had a great interest in health education on healthy nutrition during the period of quarantine from the COVID 19 pandemic.

## **2. Purpose**

Evaluation of the role of health education in Albania, through the comparison of healthy eating habits before and after health education.

## **3. Methodology**

### ***Study design, timeframe and study population***

This is a Comparative Effectiveness Research, conducted in Albania, predominantly in the City of Vlora, during May-July 2020, using the AFQPHALS (Adult Food Quality and Physical Activity Level Survey), a survey that was

distributed through social media, and was completed by 545 adult subjects (18-65 years old).

### ***Questionnaire***

The AFQPHALS, a semi-structured instrument consisting of 35 questions assessing diet quality and physical activity levels in adults, was used for data collection.

### ***Procedure***

The study was carried out in three phases: AFQPHALS study, health education and AFQPHALS (+) study.

1. The first phase: Initially, the first study, AFQPHALS (instrument with 35 questions) was distributed during the period May 17-27, 2020, through social media, to the adult population, throughout Albania.

2. The second phase: The health education, which was offered during the period of quarantine from the COVID-19 pandemic, from May 20-June 20, to 345 interested people (who had entered their email address at the end of the survey), included:

- a. Personalized information, on some physical parameters, such as:
  - Body Mass Index (BMI), weight loss percentage, level of malnutrition risk through the Malnutrition Universal Selfscreening Tool (MUST).
  - Basal metabolism, calories needed to maintain current body weight, calories needed to lose weight, calories needed to gain weight, (Harris Benedict),
  - Normal weight range (YAZIO) and ideal weight.

b. Advices on healthy eating and physical activity related to AFQPHALS questions.

3. The third phase: The AFQPHALS (+) survey, abbreviated (instrument with 30 questions and health education), was distributed during the period 20-25 June 2020, through social media, to the adult population of the city of Vlora.

### ***Data Analysis***

Descriptive statistics were used to describe the sample, outcomes, and percentage of each variable.

## **4. Results**

After completing the first phase, or the AFQPHALS study and the health education of interested subjects, the second phase of the AFQPHALS (+) study began with the advice included in the same survey.

Chart 1. Place of residence

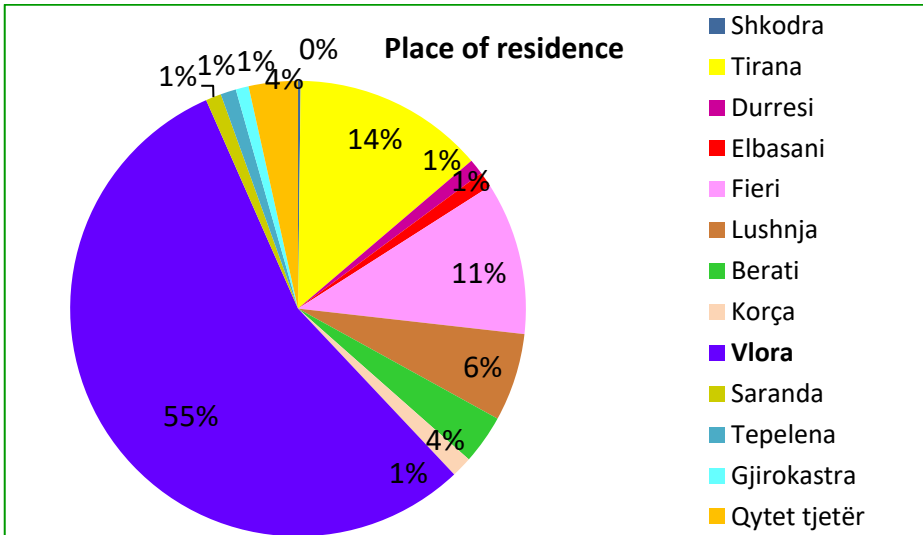


Chart 2. Gender

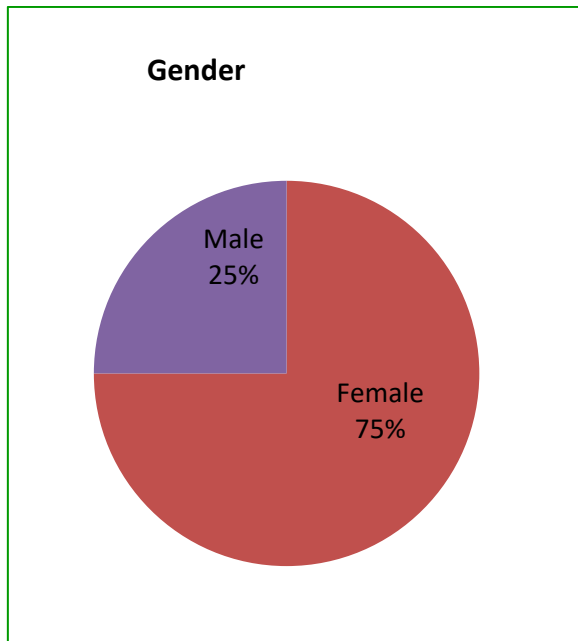
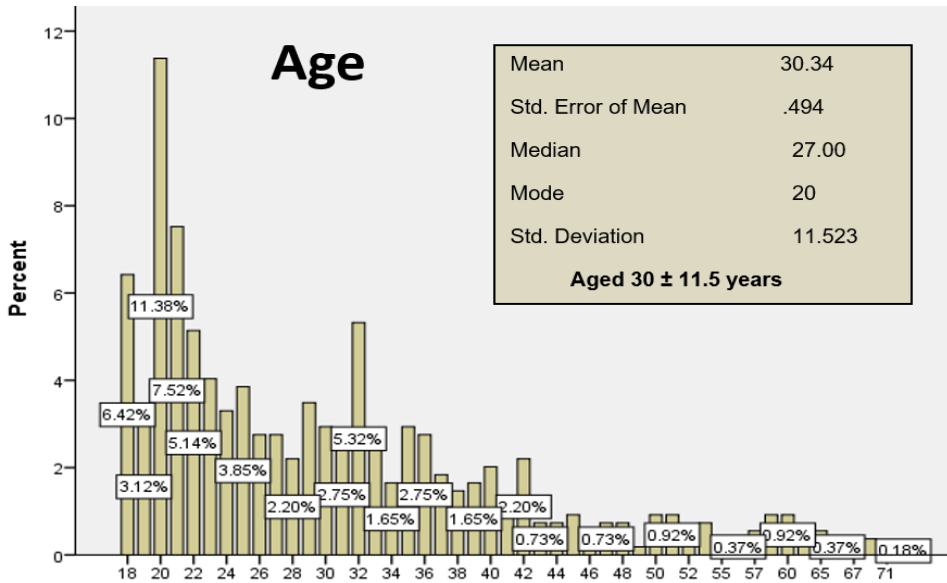


Chart 3. Age



Source: Author's own conception

From the chart of residence, gender and age we can see respectively that the City of Vlora constitutes 55% of the sample, women were 75%, and aged  $30 \pm 11.5$  years.



**Image 1.** Healthy eating plate

For a healthy and balanced diet, adults should follow the recommendations on the healthy eating plate, where 50% of the plate should consist of fruits and vegetables, while the remaining 25% should consist of grains and 25% of healthy proteins.

***Comparison of healthy eating habits***

**Table 1.** Comparison of healthy eating habits AFQPHALS and AFQPHALS (+)

HEALTHY EATING HABITS										
	It does not consume		Less than 1 time per day		1 serving per day		2 servings per day		3 servings per day	
<b>Dairy products</b>	12%	10%	29%	19%	38%	56%	17%	11%	4%	4%
<b>Fruits</b>	3%	3%	18%	9%	36%	23%	30%	50%	13%	15%
	It does not consume		Less than 1 time per day		½ serving per day		1 serving per day		2 servings per day	
<b>Vegetable</b>	5%	3%	20%	14%	20%	12%	38%	43%	17%	28%

	It does not consume		1 glass a day		2 glasses a day		3 glasses a day		4 or more glasses a day	
Water or fluids	5%	3%	19%	14%	12%	8%	18%	15%	46%	60%
	It does not consume		Less than 1 serving per week		1-3 servings per day		4-6 servings per day		More than 1 serving per day	
Milk	32%	25%	18%	9%	27%	33%	18%	25%	5%	8%
Soups	5%	3%	30%	18%	55%	33%	8%	26%	2%	20%
	Never		Less than 1 time per week		1-3 times a week		4-6 times a week		Every day	
Breakfast	12%	2%	11%	2%	17%	4%	10%	2%	50%	90%
Dinner	3%	2%	8%	5%	27%	13%	19%	14%	43%	66%
	It does not consume		Less than 1 time per week		1 serving per week		2 servings per week		3 servings per week	
Fish	16%	10%	34%	19%	34%	44%	12%	20%	4%	7%
Legumes	4%	3%	19%	10%	36%	21%	30%	32%	11%	34%
	It does not consume		Less than 3 times a week		1 serving per day		2 servings per day		3 servings per day	
Integral foods	46%	22%	21%	13%	19%	11%	9%	12%	5%	42%
	It does not consume		Less than 1 time per week		1-3 servings per week		4-6 servings per week		7 or more servings per week	
Homemade food	1%	0%	3%	4%	21%	14%	30%	26%	45%	56%
	It does not consume		1 time in 15 days		1 time a week		2 times a week		3 times a week	
Meat	6%	4%	6%	5%	15%	22%	28%	26%	45%	43%
Egg	5%	5%	7%	3%	12%	28%	24%	36%	52%	28%
	1 meal		2 meals		3 meals		4 meals		4 meals and a light dinner	
Number of meals	1%	0%	24%	15%	48%	39%	19%	36%	8%	10%

When comparing the AFQPHALS and AFQPHALS (+) studies before and after health education, it was found that after health education on healthy eating, the percentage of consumption of all food groups increased.

Fruits: after health education, the percentage of subjects consuming 2 servings of fruit per day increased from 30% to 50% and the percentage of subjects consuming 3 servings of fruit per day increased from 13% to 15%.

Vegetables: after health education, the percentage of subjects consuming 1 serving of vegetables per day increased from 38% to 43% and the percentage of subjects consuming 2 servings of vegetables per day increased from 17% to 28%.

Legumes: after health education, the percentage of subjects consuming legumes 2 servings per week increased from 30% to 32% and the percentage of subjects consuming legumes 3 servings per week increased from 11% to 34%.

Dairy products: After health education, the percentage of subjects consuming 1 serving of dairy products per day increased from 38% to 56%.

Water or fluids: after health education, the percentage of subjects drinking water or fluids 4 or more glasses per day increased from 46% to 60%.

Milk: after health education, the percentage of subjects who consume milk 1-3 portions per week has increased from 27% to 33%, the percentage of subjects who consume 4-6 portions per week has increased from 18% to 25% and the percentage of subjects consuming more than 1 serving per day increased from 5% to 8%

Soup: after health education, the percentage of subjects consuming 4-6 servings per week increased from 8% to 26% and the percentage of subjects consuming more than 1 serving of soup per day increased from 2% to 20%.

Breakfast: after health education, the percentage of subjects who eat breakfast every day has increased from 50% to 90%.

Dinner: after health education, the percentage of subjects who eat dinner every day has increased from 43% to 66%.

Homemade food: after health education, the percentage of subjects consuming homemade food less than 1 time per week increased from 3% to 4% and the percentage of subjects consuming homemade food 7 or more servings per week increased from 45 % to 56%.



Number of meals: after health education, the percentage of subjects consuming 4 meals increased from 19% to 36% and the percentage of subjects consuming 4 meals and snacks increased from 8% to 10%.

Fish: after health education, the percentage of subjects consuming 1 serving of fish per week increased from 34% to 44%, the percentage of subjects consuming 2 servings of fish per week increased from 14% to 20%, and the percentage of subjects who consume fish 3 servings per week has increased from 4% to 7%.

Whole foods: after health education, the percentage of subjects consuming oats or wholemeal bread 2 servings a day increased from 9% to 12% and the percentage of subjects consuming oats or wholemeal bread 3 servings a day increased from 5% to 42%.

Meat: after health education, the percentage of subjects who consume red meat or poultry once a week has increased from 15% to 22%.

Egg: after health education, the percentage of subjects consuming eggs 1 time per week increased from 12% to 28% and the percentage of subjects consuming eggs 2 times per week increased from 24% to 36%.

## 5. Discussion

From the first phase of the AFQPHALS study, there is a strong interest from study participants to participate in the study and to receive information and advice on healthy eating and physical activity.

Health education is important at all stages of life, but adult health education in Albania is the key to health for future generations, because good habits are taught in the family from an early age. Adults are the most active and productive part of society, but they are also the individuals who most often take care of other members of the family, whether in relation to the care and education of children and teenagers or in relation to the care of the elderly, therefore education health on healthy nutrition is very important in these age categories. Adults are also involved in food purchases, processing and cooking.

When comparing the two studies before and after health education, it was found that after health education on healthy eating, the percentage of consumption of all food groups increased, which is consistent with the goals of healthy eating.

Following the health education program, there were notable improvements in the dietary habits of the subjects. The percentage of individuals consuming 2 and 3 servings of fruit per day increased, as did the percentage of those consuming 1 and 2 servings of vegetables per day. Additionally, there was an increase in the percentage of subjects consuming legumes 2 and 3 times per week. The consumption of dairy products also saw an increase, with more individuals consuming 1 serving per day. The percentage of subjects drinking water or fluids 4 or more glasses per day also increased.

Furthermore, there were significant changes in the frequency of milk and soup consumption. The percentage of subjects consuming milk 1-3 portions, 4-6 portions per week, and more than 1 serving per day increased. Similarly, the percentage of subjects consuming 4-6 servings per week, and more than 1 serving of soup per day increased.

The health education program also had a positive impact on the subjects' meal habits. The percentage of individuals who eat breakfast and dinner every day increased. Additionally, there was an increase in the percentage of subjects consuming homemade food 7 or more times per week.

Overall, the health education program was successful in promoting healthy dietary habits among the subjects.

The results of the second phase of the AFQPHALS study (+) (survey + health education with advice on healthy eating and physical activity related to the AFQPHALS survey questions), showed an improvement in eating habits after the first phase of health education (via e-mail addresses) which was accompanied by personalized information on several body parameters and advice on healthy eating and physical activity.

It resulted in a significant improvement in the eating habits and physical activity of the citizens of Vlora in a very short period of time after the first phase of health education.

The AFQPHALS (+) study resulted in a reduction in animal proteins and fats (meat, fish, eggs, dairy) and an increase in carbohydrates (fruits, vegetables, grains and legumes). An increased consumption of fruits and vegetables is still needed.

The role of health education in eating habits is essential and has influenced the improvement of behaviors.

## 6. Conclusions on the role of health education in the quality of nutrition

Health education on healthy eating during the quarantine of the pandemic COVID -19 has had a positive impact on improving knowledge and eating habits in the Albanian adult community for a short period of time.

## 7. Recommendations

It is recommended that health authorities and institutions provide continuous education on healthy and balanced diets in all age groups so that knowledge and dietary habits improve over time and are sustainable.

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