

## **NUTRITIONAL STATUS AND LIFESTYLE AS FACTORS FOR OBESITY AND MALNUTRITION IN ADOLESCENTS IN MACEDONIA**

**Tatjana Pavlova<sup>1\*</sup>, Zlatin Zlatev<sup>2</sup>, Marija Menkinoska<sup>3</sup>,  
Tatjana Blazevska<sup>3</sup>, Zora Uzunoska<sup>3</sup>**

**<sup>1</sup>Vita Nova- ZA doo, 1519 street no. 29, 1000 Skopje, Macedonia**

**<sup>2</sup>Faculty of Technics and Technologies, Trakia University,  
Graf Ignatiev str. 38, 8602 Yambol, Bulgaria**

**<sup>3</sup>Faculty of Technology and Technical Sciences, University St. Climent Ohridski - Bitola,  
Dimitar Vlahov bb., 1400 Veles, Macedonia**

**\*e-mail: tatjanapavlova15@yahoo.com**

### **Abstract**

The adolescence is a period in which improper eating habits occur and as a consequence there are eating problems. Improper food choices and lack of physical activity are the main factors in the occurrence of basic problems such as obesity and malnutrition which are a prerequisite for the occurrence of diseases in later life stages. In Macedonia there are no detailed data on the way and habits in the diet as well as its impact in combination with the lifestyle on the occurrence of obesity and malnutrition, other non-communicable diseases and comorbidities specific to the adolescent period. Therefore, this research is an initial scientific and analytical contribution, especially to the study of this complex interrelationship, which is main purpose of this work.

For the purpose of this research, 409 high school students from several high schools in the territory of the city of Skopje took part. The respondents are of Macedonian and Albanian ethnicity. The age limit ranges from 14 - 18 years. The research was conducted by interviewing adolescents using a combined questionnaire consisting of 51 questions (Q1 - Q51), in October 2019. A pilot research was conducted, and 10% of the respondents' answers were taken as a sample. For data processing were used: software product Statistica 8. All data were processed at a level of significance  $\alpha = 0.05$ .

From the analyzed results from the pilot test it was established that the main influence on the characteristic "change in body weight" of adolescents is exerted by: the level of education of the parents; the type of food consumed; physical activity. In addition, analyzes were performed on the effect on this characteristic of smoking, and on girls the influence of their menstrual cycle.

All factors that turned out to be significant according to the pilot test, showed a significant influence on body weight among the surveyed adolescents of Macedonian and Albanian ethnicity.

**Key words:** *Obesity, Overweight, Malnutrition, Nutrition examination survey, Adolescent, Food-intake.*