

NAZIV DISERTACIJE: Komparativna analiza prehrambenih navika i stanja uhranjenosti djece u periodu rane adolescencije

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Datum odbrane: 28.11.2015. godine

DOI: <https://doi.org/10.17532/DD.2015.03>



SAŽETAK

Uvod. Prehrambene navike stečene u mlađoj dobi, a naročito u periodu adolescencije, rijetko se mijenjaju u kasnijim životnim fazama, tako da je rana intervencija za usvajanje pravilnih prehrambenih navika prioritet svake zajednice. Naročito važno je zadovoljavanje energetske potrebe, održavanje energetskog bilansa i adekvatna zastupljenost makronutrijenata zbog njihove esencijalne uloge u pravilnom rastu i razvoju. Adolescencija je dinamičan period razvoja obilježen brzim promjenama u veličini tijela, obliku i sastavu, koje su seksualno dimorfne. Tjelesne veličine dostignute u određenom uzrastu (status) i stopa rasta (napredak) se prate na grafikonima rasta, koje služe kao referenca za ocjenu veličine koju dostigne pojedinac ili grupa djece i adolescenata. Detaljna analiza rasta i razvoja zasniva se na longitudinalnim praćenjima, odnosno prikupljanju serijskih podataka za isti uzorak, što omogućava izradu krivulja rasta. Ciljevi istraživanja su analiza prehrambenih navika djece u odnosu na područje, dob i spol i utvrđivanje razlika među istim, praćenje promjene antropometrijskih parametara i pokazatelja statusa uhranjenosti djece, komparaciju prehrambenih navika sa stanjem uhranjenosti i izrada krivulja rasta na osnovu dobijenih pokazatelja statusa uhranjenosti. Ispitanici i metode istraživanja. U istraživanju je učestvovalo 1411 ispitanika oba spola u šest osnovnih škola, koje su prema geografskom položaju locirane: u kontinentalnom dijelu četiri škole, 694 ispitanika i u mediteranskom dijelu dvije škole, 717 u dobi od 12-15 godina. Svi ispitanici koji su uključeni u istraživanje praćeni su u toku dvije šk. godine 2013/14. i 2014/15. godine. U istraživanju su korištene dvije ankete: modificirana SPAN (School Physical Activity and Nutrition) anketa i KIDMED anketa. Za analizu zastupljenosti makronutrijenata i minerala u studiji korištene su Tabele sastava namirnica (Serbian food composition database) kreirane kroz projekat Evropske komisije za nauku (European Food Information Resource Network- EuroFIR) u periodu od 2005-2010 godine. U istraživanju su provedena sljedeća antropometrijska mjerenja: tjelesna masa i tjelesna visina, iz čijeg odnosa je izveden indeks tjelesne mase (BMI) kao mjera za kategorizaciju stanja uhranjenosti i četiri kožna nabora iz kojih je izveden % masnog tkiva kao morfološki pokazatelj stanja uhranjenosti. Antropometrijska mjerenja su provedena u periodu od dvije školske godine, tri puta u razmaku od šest mjeseci između dva mjerenja. Rezultati: Prehrambene navike su predstavljene kroz zastupljenost broja obroka i doručka, kao i kroz procentualnu zastupljenost ukupnih makronutrijenata u ishrani adolescenata sa posebnim akcentom na zastupljenost polisaharida, mono i disaharida, dodanih šećera, proteina animalnog i biljnog porijekla, zasićenih i polinezasićenih masnih kiselina. Od mikronutrijenata je predstavljen unos minerala kalcijuma, željeza i cinka, analiziran kroz zastupljenost pojedinih namirnica u ishrani i u poređenju sa preporučenim dnevnim unosom (RDA). Predstavljene su percentilne vrijednosti i trend kretanja ovih parametara u vremenskom periodu od dvije godine. Grafički su predstavljene percentilne krivulje u odnosu na referentne krivulje Evropske agencije za sigurnost hrane (EFSA) i Svjetske zdravstvene organizacije (SZO) prema spolu i dobi na dva ispitivana područja. Kategorizacija stanja uhranjenosti je radena prema referentnim cut off tačkama Svjetske zdravstvene organizacije i International Obesity Task Force (IOTF). Na osnovu dobijenih rezultata iz tri uzastopna mjerenja predstavljen je indeks tjelesne mase (BMI) u svrhu korištenja ovih percentilnih vrijednosti kao referentnih vrijednosti za istu dobnu skupinu adolescenata. Zaključci: Dokazano je postojanje statistički značajne razlike kako u prehrambenim navikama, tako i u antropometrijskim pokazateljima i stanju uhranjenosti adolescenata na dva ispitivana područja, kontinentalnom i mediteranskom.

Ključne riječi: adolescenti, prehrambene navike, antropometrijski pokazatelji, stanje uhranjenosti

DISSERTATION TITLE:**Author:** Arzija Pašić**Mentor:** Prof. dr Fatima Jusupović**Date of defence:** 28. November 2015.**DOI:** <https://doi.org/10.17532/DD.2015.03>**SUMMARY**

Introduction: Eating habits acquired at a young age, especially during adolescence, rarely change in the later stages of life, so an early intervention to adopt proper eating habits should be prioritized in each community. It is particularly important to meet the energy needs, to maintain energetic balance and to have adequate proportion of macronutrients because of their essential role in proper growth and development. Adolescence is a dynamic period of development characterized by rapid changes in body's size, shape and composition, and is gender dimorphic. Body size at a certain age (status) and growth rate (advances) are monitored on growth charts, and used as a reference when assessing the size of an individual or a group of children and adolescents. A detailed analysis of growth and development is based on the longitudinal follow-up carried through collection of serial data for the same sample, which enables the production of growth curves.

This study aims to analyze eating habits of children depending of the region, age and gender, to identify the differences, to track changes in anthropometric parameters and indicators of nutritional status of children, to compare dietary habits with malnutrition, and to produce growth curves based on the obtained indicators of nutritional status.

Materials and methods of research: The study included 1,411 examinees of both genders in six elementary schools having the following geographical position: continental part — four schools covering 694 examinees, and Mediterranean part — two schools covering 717 children between 12 and 15 years of age. All the examinees were monitored during two academic years: 2013/14 and 2014/15. The study is based on two types of surveys: a modified SPAN (School Physical Activity and Nutrition) and KIDMED survey. For analysis of the distribution of macronutrients and minerals were used the tables of food composition (Serbian Food Composition Database) created through the project of the European Commission of Science (European Food Information Resource Network — EuroFIR) in the period from 2005 until 2010. The research involved the anthropometric measurements of body weight and body height to derive the body mass index (BMI) as a measure for the categorization of the nutritional status of four skin folds needed for the percentage of body fat as a morphological indicator of nutritional status. Anthropometric measurements were performed over a period of two academic years, on three occasions in the span of six months between the two measurements.

Results: Dietary habits are shown through the number of meals and breakfasts, as well as through the percentage of representation of total macronutrients in the diet of adolescents with special emphasis on the presence of polysaccharides, mono and disaccharides, added sugars, proteins of animal and vegetable origin, saturated and polyunsaturated fatty acids. Out of micronutrients, presented intake of minerals - calcium, iron and zinc - was analyzed through the presence of certain foods in the diet and compared to the recommended daily allowance (RDA). The percentile values and trends of these parameters were presented by covering the period of two years. The graphics show percentile curves with reference to the relevant curves of the European Food Safety Authority (EFSA) and the World Health Organization (WHO) according to gender and age of children at the two examined locations. The categorization of the nutritional status was performed according to the reference cut-off points of the WHO and the International Obesity Task Force (IOTF). Based on the results of three consecutive measurements, there was presented a body mass index (BMI) for the purpose of using these percentile values as reference values for the same age group of adolescents.

Conclusions: Statistically significant differences are proved in regards to the dietary habits, anthropometric indicators and nutritional status of adolescents at the two studied areas — continental and Mediterranean.

Keywords: adolescents, dietary habits, anthropometric indicators, the nutritional status