

SHORT COMMUNICATION

VARIATION IN VITAMIN D PLASMA LEVELS ACCORDING TO STUDY
LOAD OF BIOMEDICAL STUDENTS

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Keywords: 25-hydroxyvitamin D, vitamin D deficiency, biomedical study, focus group

Students' life can be perceived by the different prisms. On one hand, that is the happiest time of life while on the other side, that is a period that changes lifestyle habits. Numerous studying commitments over a school year can decrease certain extracurricular activities such as spending time outdoors, playing a sport or just walking and consequently lead to reduced exposure to sunlight, which is the major risk factor for vitamin D deficiency. Vitamin D is substantial for achieving and up keeping calcium homeostasis and consequently accomplishing skeleton health. Besides the aforementioned, there is a great number of studies that showed a whole variety of vitamin D effects on human body such as prevention of cancer, cardiovascular, autoimmune, infectious and respiratory diseases, and preservation of mental health (cognitive impairment and depression) (1–3).

Our aim was to see how study load and some other factors correlate with vitamin D plasma levels of healthy students from the Faculty of Medical Sciences in Kragujevac. The study was approved by the Ethics Committee of the Faculty of Medical Sciences, University of Kragujevac, Serbia and the students signed informed consent for participation in the study. The study took place from April 2012 to August 2012. The students were from three different study courses (medicine, pharmacy and dentistry) and from various study years (from 1 to 5).

Average vitamin D level (25-hydroxyvitamin D) in the study population of 86 students was 13.263 ± 4.86 ng/mL that was significantly below cut off point for sufficient vitamin D level ($p < 0.001$) (2). Vitamin D deficiency was observed in 88.37% participants. Sex, study course, average study score, average vitamin D food intake (calculated for period of 30 days before blood samples were taken), body mass index, biochemical parameters (phosphate level, urea, creatine, total protein) and endocrine parameters (FT4, TSH and PTH level) did not correlate with vitamin D plasma levels ($p > 0.05$). There was weak but significant correlation between level of vitamin D (25-hydroxyvitamin D) and calcium level ($r = 0.228$; $p \geq 0.05$).

However, the year of study influenced vitamin D levels ($p \geq 0.05$): the students of the third year of study had the lowest average level while students of the fifth year had the highest average level of vitamin D, 11.825 ± 4.372 ng/mL and 15.397 ± 4.103 ng/mL, respectively (Fig. 1). We thought that reason for such results may be decreased exposure to sunlight of students in the third year in comparison with other years ($p \geq 0.05$).

In order to examine the influence of study load on variation of serum vitamin D level by biomedical students authors created a focus group that was composed of 15 graduated students by Faculty of

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