



## The Effect of Study in Prone Position on The Spine Angles Of 13–18-Year-Old Students in Karaj

### Poster Presentation

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### Abstract

**Introduction:** After the outbreak of the Covid virus 19 and the subsequent virtualization of education, students are trained at home. Most of them do not observe the standard and correct physical condition while studying and doing homework. This study aimed to investigate the effect of the survey in the prone position on the spine angles of 13-18-year-old students in Karaj.

**Methods:** This research was a quasi-experimental and comparative study that was conducted by field method. For this purpose, 105 students of 13-18 years old girls' schools in District 3 of Karaj in the academic year, who were accustomed to lying on their stomachs, randomly participated in the study and based on the number of study hours per day, in three groups less from 1 hour, between 1 to 2 hours and more than 2 hours. Research variables including forward head angles, unequal shoulder, lumbar lordosis, kyphosis and scoliosis were assessed using standard tests with high validity and reliability. Data were analyzed using one-way analysis of variance and Bonferroni post hoc test at the significance level of 0.05.

**Results:** There was a significant difference between lumbar lordosis and forward head angle abnormalities among students who were less than 1 hour and more than 2 hours accustomed to lying on their stomachs ( $P < 0.05$ ). This difference was insignificant for unequal shoulder variables, kyphosis, and scoliosis ( $P < 0.05$ ). Students who studied for more than 2 hours a day while lying on their stomachs had lumbar lordosis abnormalities and a supine angle. According to the results of this study, it is recommended that to avoid studying in a Prone Position to prevent lumbar and forward lordosis abnormalities.

### Keywords

Forward head; Uneven shoulder; lordosis; kyphosis; Scoliosis

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