

Effect of Gender and Physical Activity on Flexibility of the Trunk and Lower Body among Students of Faculty of Allied Health Sciences, University of Peradeniya

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Physical inactivity is a leading risk factor for global mortality while the flexibility is a key factor for determining an individual's status of health. This study intended to discover the impact of gender and physical activity level on the flexibility of lumbar spine and lower extremities in set of students from the Faculty of Allied Health Sciences of University of Peradeniya. It further explored the correlation of flexibility of two different regions of body in individuals categorized in the same level of physical activity as well. In this cross-sectional study, the sample was chosen using stratified random sampling method. 35 students from each gender (n=70) were divided into three categories (low, moderate and high) based on their physical activity level evaluated using International Physical Activity Questionnaire-short form (IPAQ). Modified Schober test was used to measure the flexibility of lumbar spine while Sit-and-Reach and Groin Flexibility tests were used to measure the flexibility of lower limbs. The study revealed that the males were more flexible in both lumbar spine (22.26) and lower limb (7.46) than that of females (21.4), (6.66) respectively. With regard to physical activity, it showed a weak positive correlation ($r=0.236$, $p<0.05$) with the flexibility of lower limbs but showed no correlation with the flexibility of lumbar spine ($r = -0.179$, $p>0.05$). It further revealed that the flexibility of lumbar spine and lower limbs had no correlation in between them in people who were either moderately or highly active, but in people categorized under low physical activity level, they had a strong positive correlation in between them. This study showed that, physical inactivity may reduce the flexibility irrespective of its specificity to each joint or area of the body. Thus, importance should be given clinically to alleviate physical inactivity in order to improve the general status of health.

Keywords: Physical activity, Flexibility, Gender, Lower limb, Lumbar spine