

The ergonomics of seating design in lecture hall at Faculty of Medicine and Health Sciences (FMHS), Universiti Putra Malaysia (UPM)

ABSTRACT

This is a cross-sectional study with the objective to determine the association between complaints Musculoskeletal Disorders (MSDs) and mismatch of the seats in lecture hall of Faculty of Medicine and Health Sciences (FMHS), Universiti Putra Malaysia (UPM). A total of 132 respondents whom were undergraduate students were involved in this study consist of 47 male and 85 female. Eight anthropometric measurement (height, weight, popliteal height, buttock-popliteal height, shoulder height, subscapular height, elbow height and hip width while sitting) as well as five (5) furniture parameter dimensions (seat height, seat depth, seat width, upper edge backrest height and desk height) were taken. Instruments used were questionnaire modified from Nordic Musculoskeletal Questionnaire, Martyn anthropometer set, measuring tape, height scale and weighing scale. Findings showed 51.5% mismatch of seat height, 5.3% mismatch of seat depth, 94.7% mismatch of desk height and 18.2% mismatch of upper edge of back rest. For the prevalence MSDs in the past seven (7) days, 61.4% reported low back pain followed by neck pain (50%) and upper back pain (43.9%). There was significant difference between genders in anthropometric body measurement. Significant association were found between MSDs and mismatch $\chi^2 = 5.406$, $p < 0.05$. In conclusion, there was an association between MSDs and ergonomics furniture of lecture halls in FMHS, UPM. Based on the findings, it is recommended that in the event of long lecture hour, intermittent break should be allowed for students to stretch, move or better yet assume different posture such as standing or walk.

Keyword: Mismatch; Anthropometry; MSDs; University student