

FLEXAR: deFining Lumbar Extension, fleXion And Rotation in the workplace

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Aim:

- To identify lumbar movement patterns of Allied Health professionals across Peninsula Health throughout a normal workday
- To ascertain the prevalence of low back pain of Allied Health working at Peninsula Health.

Method:

Data collected:

- Age, height, gender, profession, low back pain history
- QVAS and Oswestry LBP Disability Questionnaires
- Vi-move sensors determined participant's resting posture and maximum range of motion through normal workday activities
- VAS at the end of the day

Analysis

Professions with more than 10 participants each were grouped. Means(SD), Medians (IQR) and frequencies were collected in regards to the number of particular movements performed per hour, per shift, and the degree to which each movement was performed. Pre-post VAS of current pain was analysed with a two Sample Wilcoxon rank sum.

Figure 1. Total time: Sitting, standing, and dynamic posture

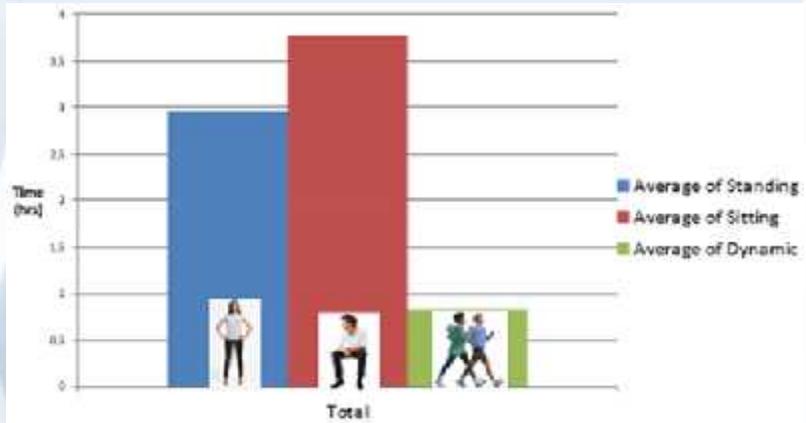
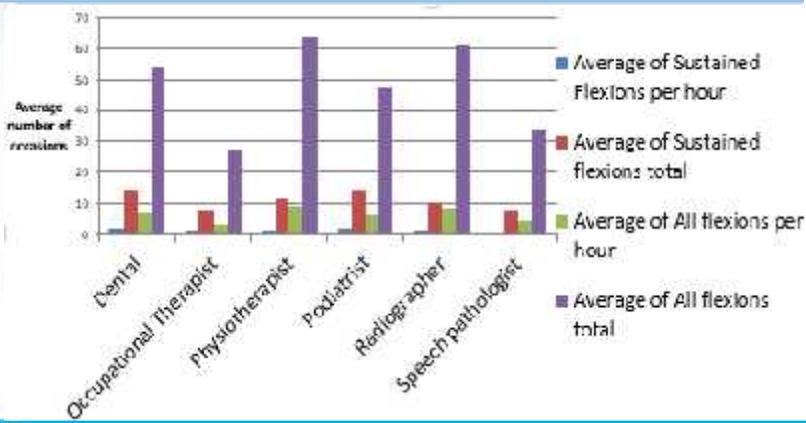


Figure 2. Total Flexions by Profession



Results:

- 121 participants (11 Allied Health professions)
- 99 (81%) female
- Mean (SD) age of 35 (11.3) years
- 37 (31%) history of lower back injury
- 21 (17%) time off work due to low back pain

Figure 1 displays the average time participants spent in different working positions.

Differences in lumbar movement patterns were identified between professions (Fig 2). Podiatrists and dental staff performed more than 14 sustained flexions during a normal workday.

Physiotherapists and Radiographers perform more than 60 total flexions per day, almost double that of Speech pathologists who perform an average of 34 total flexions. There was no significant difference between pre and post VAS of current pain levels.

Conclusion

Allied health spend large periods of their day sitting. Lumbar movement patterns differ depending on profession. Professions should consider this impact on the back health of each profession.