A Comparison of a Self Selected and an Ergonomic Posture When Using a Saddle Chair



Annetts S., Coales P., Eleni Kloni M. Koelmel S. and van Deursen R. School of Healthcare Studies, Cardiff University, CF14 4XN, UK

Introduction

Seating design has developed to provide alternatives to a standard office chair, such as the saddle chair. However, it is unknown if in order to use the chair effectively a user needs to be advised on an ergonomic posture, or if a self selected posture produces the same effect.

Aim

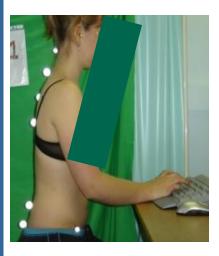
To investigate if there is a difference in: Head tilt (HT); Neck angle (NA); Cervicothoracic angle (CTA); Thoracic angle (TA); Lumbar angle (LA); and Pelvic tilt (PT) when comparing a self selected comfortable position (SSCP) and a standardised ergonomic position (SEP) when sitting on a Saddle Chair



Bambach Saddle Chair

Method

This pilot study was an experimental same subject design (n = 13) using healthy subjects conducting a typing task. Standardised instructions were given regarding the adjustment of the saddle chair. Subjects were asked to adopt a SSCP and carry out a splitscreen typing task. Further standardised instructions were then given and adjustments made to achieve a SEP, and the task repeated. Analysis was via digital photographs analysed within MatLab. Wilcoxon Signed Rank Tests were conducted for each spinal variable.



Work-station task

Results

	SSCP	SEP	
НТ	141.57	138.71	
NA*	51.40	47.79	
CTA*	174.44	173.35	
TA	45	44.46	
LA	-18.25	-17.86	
PT	-2.87	-3.91	

^{*} Statistically significant difference ($p \le 0.05$)

Conclusion

- There is only a statistically significant difference in relation to NA and CTA, the SEP producing a more appropriate posture.
- Instructions on ergonomic position partially enhances spinal posture on a Saddle chair.

Bibliography

Annetts S, Coales P, Colville R, Mistry D, Moles, K, Thomas B and van Deursen R. (2012). A pilot investigation into the effect of different office chairs on spinal angles. European Spine Journal. Vol 21, Supp 2, 165 – 170.

Acknowledgements

Bambach