



Concentration requirements modify the effects of office type on health and performance

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Objectives

Studies of the impact on health and productivity of different types of office environments usually compare cell offices with open-plan offices. This paper investigates the interaction between need for concentration on the job and six more specific office types (cell office, shared-room office, small open-plan office, medium-sized open-plan office, large open-plan office and flex office) in relation to indicators of health and performance.

Methods

A 2x6 between-subject multivariate analysis of covariance was conducted on the dependent variables distraction, cognitive stress, emotional exhaustion, depersonalization, personal efficiency and general health while controlling for age, educational level, gender and sector of the labor market. The independent variables were need for concentration (two categories) and office type (six categories). 1241 employees from five organisations, both in the private and public sectors, participated in the study.

Results

Cell offices were associated with lower reported levels of distraction and cognitive stress, and flex offices with lower distraction, among the employees compared with all other open-plan office types. However, there were no significant differences in the outcome variables between different types of open-plan offices. There was an interaction between office type and the need for concentration for the job; employees in the high need for concentration group reported more distraction in all office types except in cell offices and also more cognitive stress in all office types except cell offices and flex offices.

Conclusion

This study suggests the presence of negative health and performance aspects in individuals working in open-plan offices. This seems especially true for those who have tasks that require a high need for concentration. In order to prevent poor health and loss of performance, organisations working in similar office types should have an action plan in order to lower the amount of distraction and cognitive stress prevalent in open-plan offices.

Figure 1

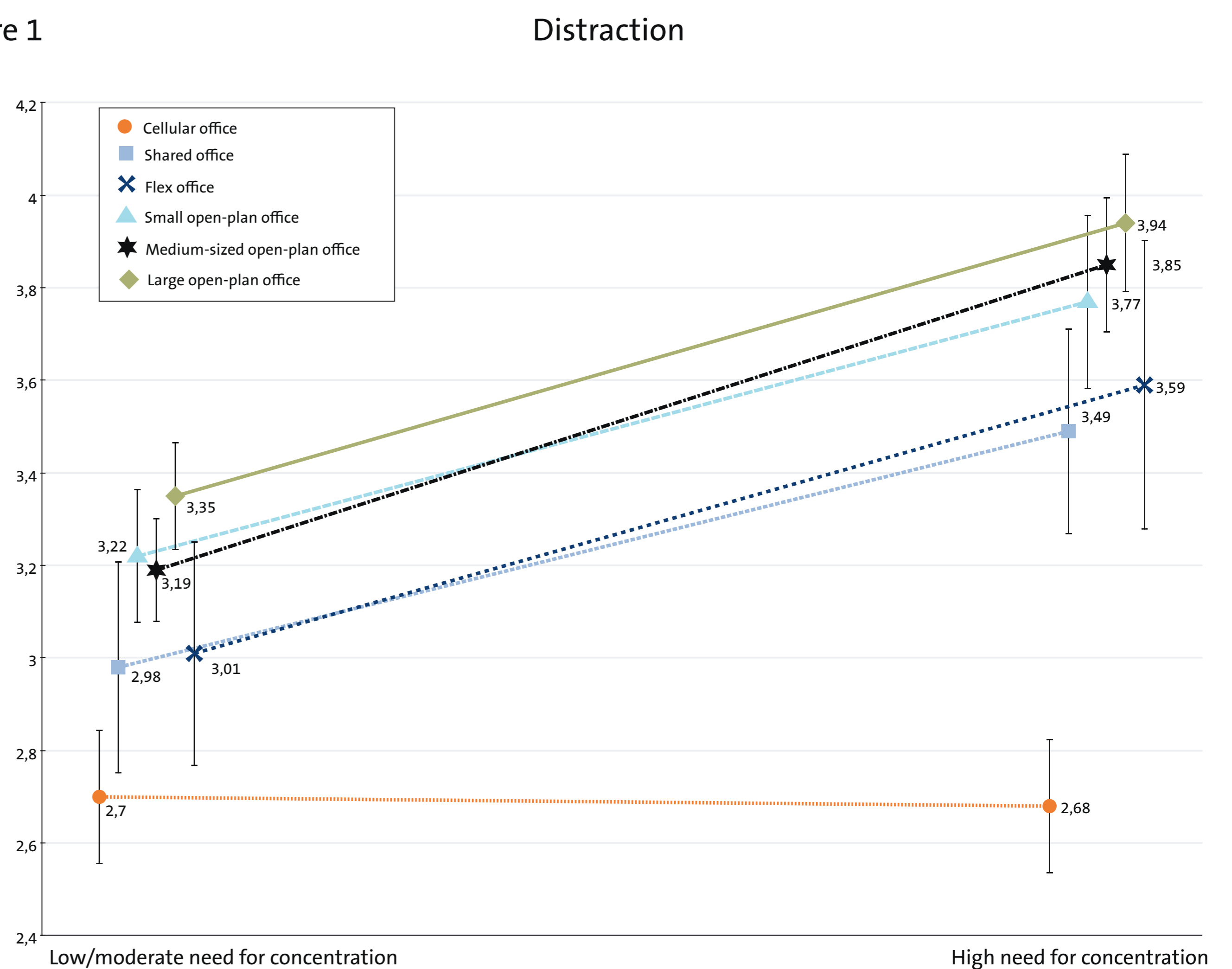


Figure 1. Unweighted marginal means for Distraction with 95 % CIs adjusted for age, sex, education and labor market sector.

Figure 2

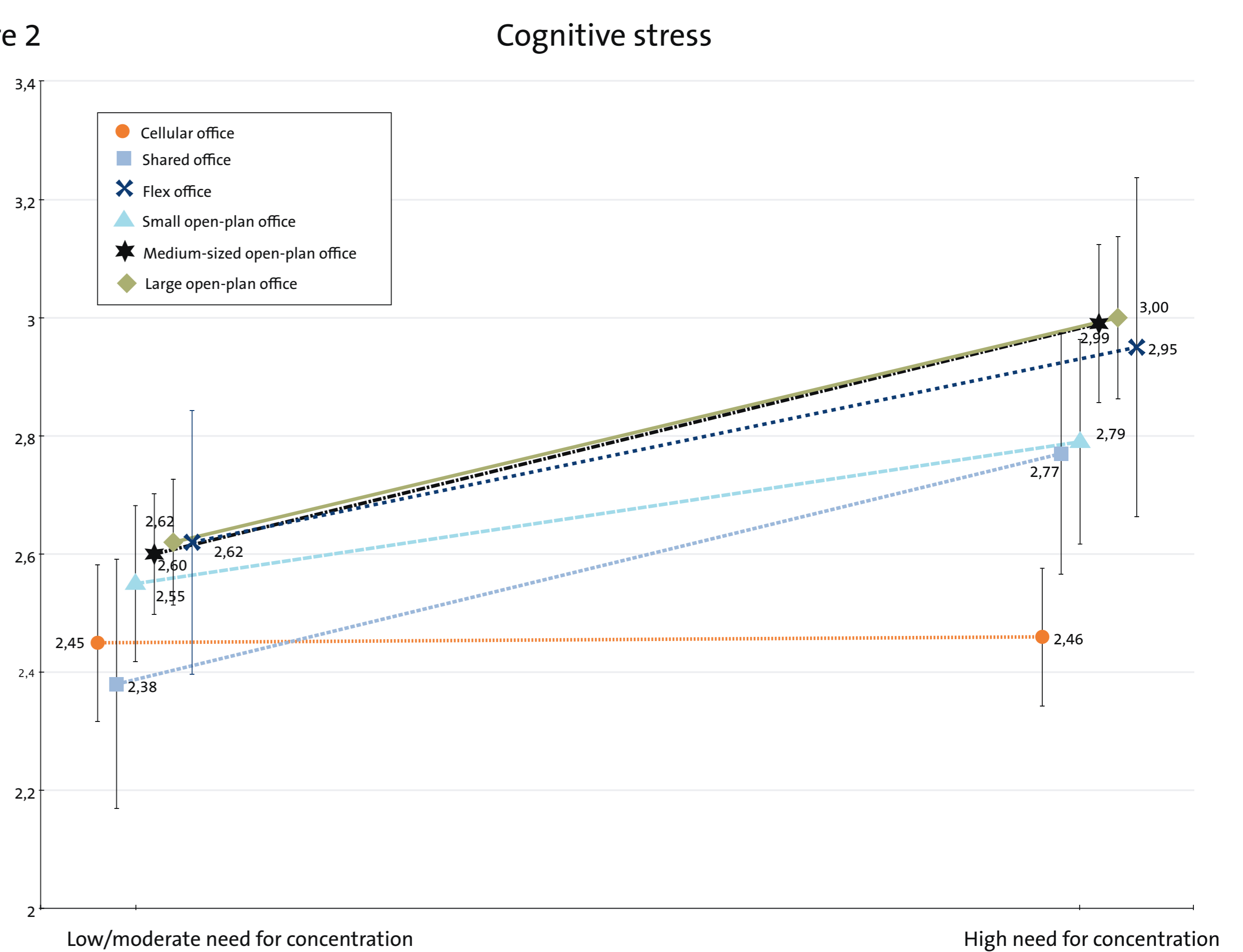


Figure 2. Unweighted marginal means for cognitive stress with 95 % CIs, adjusted for age, sex, education and labor market sector.