

P104

**THE ROLE OF WORK ABILITY IN THE RELATIONSHIP BETWEEN AEROBIC CAPACITY AND SICK LEAVE: A MEDIATION ANALYSIS**

Jorien Strijk,<sup>1</sup> Karin Proper,<sup>1</sup> Maartje van Stalen,<sup>1</sup> Willem van Mechelen,<sup>2</sup> Allard van der Beek<sup>1</sup> <sup>1</sup>VU University Medical Center, Amsterdam, The Netherlands; <sup>2</sup>TNO-VUmc, Amsterdam, The Netherlands

10.1136/oemed-2011-100382.318

**Objectives** This study aims to examine the relationships between aerobic capacity, work ability and sick leave, the

potential mediating effect of work ability in the relationship between aerobic capacity and sick leave, and the influence of age on these relationships.

**Methods** Among 580 workers, information on aerobic capacity (predicted  $\text{VO}_{2\text{max}}$ ), age, gender, type of work, cardiovascular risk, and body mass index (BMI) was collected at baseline. Aerobic capacity was predicted using a maximal exercise test on a cycle ergometer or on a running treadmill. Work ability was assessed with the Work Ability Index (WAI) at first follow-up. The second follow-up period was defined as the time between measured WAI and the first registered sick leave episode. Mediation analyses were performed using linear and Cox regression models.

**Results** A lower aerobic capacity was significantly related to sick leave ( $\text{HR}=0.98$ ;  $t=-0.018$ ; 95% CI: 0.970 to 0.994). There was a significant positive relationship between aerobic capacity and work ability ( $a=0.165$ ; 95% CI: 0.122 to 0.208). Also, lower work ability was significantly related to sick leave after controlling for aerobic capacity ( $\text{HR}=0.97$ ;  $b=-0.033$ , 95% CI: 0.949 to 0.987). Work ability mediated 27.8% (95% CI: 10.4 to 45.2) of the total effect of aerobic capacity on sick leave. There was no influence of age on the relationship between aerobic capacity and sick leave.

**Conclusions** This study showed that fit workers had a better work ability, and that both fit workers and workers with higher work ability were at lower risk of starting an episode of sick leave. Work ability mediated the relationship between aerobic capacity and sick leave for 27.8%.