

**Self-reported Health Problems and Obesity Assessed with Health Risk Appraisal Predict Sickness Absence During a 12-month Follow-up: A Prospective Cohort Study in 21608 Employees from Different Industry Fields**

**Aim:** The present study evaluates, how the Health Risk Appraisal (HRA) results predict sickness absence (SA) in respondents from various industry fields and occupation, and the potential additive roles of self-reported health problems, age, and obesity.

**Introduction:** Structured questionnaires are increasingly used as part of targeted health surveillance. The study evaluate whether health inspections can be supplemented by the HRA.

**Methodologies:** The study design is a retrospective analysis of prospectively collected register data. The research utilizes the results of the HRA (N=21608) collected in 2012-2015 and archival data of SA covering 2011-2016 from a large nationwide database of one OH service provider. Explanatory variables were self-reported symptoms, age, body mass index, occupational group and the number of SA days before the survey. The outcome measure was accumulated SA days during 12-month follow-up. A Hurdle model with negative binomial response was used to analyze zero-inflated count data of SA separately for males and females.

**Results and discussion:** Work disability (WD) risk factors as defined in the HRA predicted the number of accumulated SA days during the 12-month follow-up, regardless of occupational group and gender. The ratio of means of SA days varied between 2.6 and 6.1 among those with WD risk factors and the reference category with no findings, depending on gender and occupational group. The lower limit of the 95% confidence interval (CI) was at the lowest 1.6. In the Hurdle model, WD risk factors, SA days prior to the HRA and obesity were additive predictors of the propensity for SA and/or the accumulated SA days in all occupational groups.

**Conclusion:** Self-reported health problems in a HRA, obesity, and prior SA predict higher total count of SA days in an additive fashion. These findings have implications for both management of the health care system and in the prevention of WD.

**Keywords:** health risk appraisal, sickness absence, obesity, register data, occupational medicine

**Objectives:** To study whether self-reported health problems predict sickness absence (SA) from work in employees from different industry fields.