

## 3.S. Poster walk: Health promotion

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**Sickness absence patterns during the COVID-19 pandemic among Finnish public sector employees**

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**Background:** The patterns of sickness absence (SA), that is, the clustering of differing lengths of episodes and total number of days absent, have not been examined. We examined these SA patterns and factors associated with the patterns during the COVID-19 pandemic.

**Methods:** We used survey data from employees of four large Finnish cities in 2020 linked with SA data in 2021 retrieved from employer registers (n = 39 791). SA patterns were defined through cluster analysis (K-means) including number of SA days, short (1-9 days), and long (10-365 days) SA episodes within one year. The associations of employee and work characteristics in 2020 with SA clusters in 2021 were analysed with multinomial regression.

**Results:** Four SA patterns (=clusters) were identified: 1) Optimal SA pattern (n = 31 320, 79%), 2) Recurring short SA episodes (n = 5149, 13%), 3) Recurring long SA episodes (n = 2964, 7%), and 4) Very high levels of SA with long episodes (n = 358, 1%). Compared to optimal SA pattern, female gender, higher body mass index, former smoking, abstinence from alcohol, not being in high occupational socioeconomic position, on-site work during COVID-19, and COVID-19 infection were associated with all suboptimal SA patterns. Recurring short SA episodes were more likely in younger employees (odds ratio=0.98, 95% confidence interval 0.97-0.98), those with a temporary job (1.10, 1.00-1.20), current smokers (1.34, 1.21-1.48), those using passive commute modes (1.03, 1.01-1.05 [car]; 1.02, 1.00-1.04 [public transport]), and those who had experienced a team reorganization due to COVID-19 (1.27, 1.10-1.46). The two most adverse SA patterns were more likely among older employees, and less likely among those cycling to work (0.91, 0.84-0.98; 0.97, 0.95-0.99).

**Conclusions:** We identified three differential suboptimal SA patterns. Compared to the optimal SA pattern, several individual-level risk factors, but also some COVID-19 related factors were found to associate with suboptimal SA patterns.

**Key messages:**

- We identified three suboptimal sickness absence patterns during COVID-19 pandemic.

- Individual characteristics, but also COVID-19 related factors were associated with the observed sickness absence patterns.