Does unbalanced gender composition at the work place influence the association between psychosocial working conditions and sickness absence?

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Abstract

Earlier research has shown that bad psychosocial working conditions contribute to sick-leave. Some theorists argue that skewed gender composition can be one of the factors of bad psychosocial working conditions. In this study we examine whether workplace gender composition has an effect on the association between job strain and sick-leave using Swedish data collected in 2008 (n=5595). Results indicated that there was an association between high strain jobs and sickness absence among both women (Adj. OR 2.04, CI95% 1.62-2.57) and men (2.24, 1.67-3.01). Furthermore, both women (2.87, 1.34-6.26) and men (2.53, 1.74-3-69) in male-dominated workplaces had the highest risk for sickness absence due to high strain jobs. These findings indicated that male-dominated workplaces were, in general adverse for both women and men. Additionally, there was an insignificant association between high strain jobs and sickness absence for men in female-dominated workplaces (1.69, 0.71-4.08). Results indicated that a minority position strengthens job strain for women while it weakens the association for men. Once modern gender theories had been applied, we could argue that some of these results were explained by masculinity as the social norm in the labor market, in general. However, findings from this study need to be validated by further research.

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Abstract: Earlier research has shown that bad psychosocial working conditions contribute to sickness absence. Some theorists argue that skewed gender composition can be one of the factors of bad psychosocial working conditions. In this study we examine whether workplace gender composition has an effect on the association between job strain and sickness absence using data collected in the Swedish county of Västra Götaland in 2008 (n=5595). Results indicated that there was an association between high strain jobs and sickness absence among both women (Adj. OR 2.04, CI95% 1.62-2.57) and men (2.24, 1.67-3.01). Furthermore, both women (2.87, 1.34-6.26) and men (2.53, 1.74-3-69) in male-dominated workplaces had the highest risk for sickness absence due to high strain jobs. These findings indicated that male-dominated workplaces were, in general adverse for both women and men. Additionally, there was an insignificant association between high strain jobs and sickness absence for men in female-dominated workplaces (1.69, 0.71-4.08). Results indicated that a minority position strengthens job strain for women while it weakens the association for men. Once modern gender theories had been applied, we could argue that some of these results were explained by masculinity as the social norm in the labour market, in general. However, findings from this study need to be validated by further research.

1. Introduction

A frequently used model in social science and medicine is the concept of job demand and job control introduced by Robert Karasek [1]. Demand and control are commonly constructed into the Job strain-index which proposes that specific combinations of psychosocial working conditions are more or less associated with various health-related outcomes. The Job strain hypothesis has been used in a large number of studies predicting various health related outcomes [2] and has also been useful when predicting sickness absence [3-5]. Another theoretical proposition in previous research is that a skewed gender composition in the workplace can be an important factor of psychosocial working conditions [6-10]. Kanter [6] suggests that minorities are perceived as different from majorities in their workplace and may experience more adverse psychosocial working conditions. Minorities like females in male-dominated occupations and vice versa, could have difficulties in establishing social relationships with co-workers and are under increased risk of higher levels of stress. One other theorist, Blau, [8] focusing on intergroup relations, contends that the larger a minority is, the more likely are majorities and minorities to interact and vice versa. Furthermore, both Kanter [6] and Blau [8] argue that skewed workplaces are in general associated with worse psychosocial working conditions. Therefore, investigating whether workplace gender composition has an influence on the association between adverse psychosocial working conditions and sickness absence is of interest.

Building on modern gender research and the current gender order, it can be seen that there are distinct differences regarding the effects on minorities in the workplace. The prevailing gender order in western societies reflects the fact that men and masculine behaviour generate higher status at work [11, 12]. This gender order is expressed in the vertical and horizontal occupational gender segregation, where higher status positions are more often held by men and male-dominated occupations are associated with higher status and pecuniary rewards [13, 14]. In general, male sex implies higher status vis-à-vis female sex, and thus a minority position could be of benefit to men but adverse to women. Furthermore, masculine health related behavior is characterized by a tendency to conceal weaknesses and to avoid help seeking [11]. If such health related strategies are adopted by women in minority positions in workplaces dominated by men, this could generate the same adverse health related outcomes evident among men [11]. Currently

little is known about how workplace sex composition influences the association between job strain and sickness absence.

1.2 Aim and hypothesis

The objective of the study was to investigate whether in a general population of employed women and men, unbalanced gender composition in the workplace influences the association between adverse psychosocial working conditions and sickness absence. In line with the predictions of the demand control model [1], our first hypothesis is that high strain jobs are associated with sickness absence for both women and men (H1). The second hypothesis is that working in male-dominated workplaces increases the influence of high strain jobs on sickness absence for both women and men (H2). The rationale for the second hypothesis are adverse health effects of the minority position held by women and masculine health related behaviour in the workplace influencing both women and men. The third hypothesis is that the association between high strain jobs and sickness absence is weaker for men working in workplaces dominated by women (H3), due to the higher status associated with the male sex and masculine behaviour.

2 Statistical methods and material

2.1 Research design and study population

This cross-sectional study was part of the Health Assets Project (HAP) based in the Västra Götaland region, Sweden, which has approximately 1.6 million inhabitants in rural and urban areas. HAP started in 2008 and addresses a general population cohort, randomly selected by Statistics Sweden, and a sick-listed population cohort, consecutively selected by Swedish Social Insurance Agency. In both cohorts, people aged 19-64 years and living in Västra Götaland region were sampled. The sick-listed population cohort was sampled during the period February 18, 2008 to April 15 2008. Baseline data was collected using registered data and a postal questionnaire, which was conducted from April 15, 2008 to June 30, 2008. In total, there were 7835 participants of whom 61% were women. The general population cohort consisted of 4027 participants and the sick-listed cohort of 3808. A drop-out analysis of the total study population showed a significantly higher drop-out rate in the youngest age group, 19–30 years of age, at the lowest income level, ≤149,000 SEK, and among those born outside Sweden and the other Nordic countries. Furthermore, the

drop-out rate was higher among those living alone, compared with married or cohabiting individuals. Women, but not men, living in urban areas had a significantly higher drop-out rate than women living in rural areas. Separate analyses of each cohort, the general population cohort and the sick-listed cohort showed a similar drop-out pattern overall.

This study targets participants who stated in the survey that they were employed. Participants in the sick-listed cohort had all been reported by their employer to the Swedish Social Insurance Agency after 14 days of sick-leave. Women who stated that they were pregnant in the survey were excluded from both cohorts. In total the study population consisted of 5595 of whom 2702 belonged to the general population cohort (GPC) and 2893 the employed sick-listed cohort (SLC) (Table 1).

TABLE 1

2.2 Predictors

Psychosocial working conditions were defined by using the Swedish Demand-Control-Support Questionnaire (DCSQ), which contains 17 items (5, 6 and 6 respectively). Each item in the DCSQ is answered on a Verbal Descriptive Scale (VDS). In this study we used the questionnaire for demand and control, which ranges from yes, often to no and never. A more detailed introduction of the DCSQ can be found in Sanne et al [15]. For demand the Cronbach's alpha coefficient was 0.71 for women and 0.70 for men. Coefficient for control was 0.68 for women and 0.73 for men. Values were given to each item on a four-point VDS and the sum scores were calculated on each index. The mean (median) value for the self-reported demand index was for women 13.8 (14) and 13.6 (14) for men. The mean (median) value for the self-reported control index was 17.8 (18) for women and 17.9 (18) for men. Both sum scores and the Cronbach´s alpha coefficients correspond well with what has been previously reported for Swedish data [3]. In this study each index has been dichotomised using median value. Demand and control was dichotomised into high and low. The dichotomised demand and control variables are combined into the job strain index, whose outcomes are low strain jobs (low demand, high control), High strain jobs (high demand, low control), Passive jobs (low demand, low control) and Active jobs (high demands, high control).

2.3 Confounders

Logistic regression estimates are presented crude and adjusted. Demographic variables such as age (19-64 years), education (elementary school or less, high school, university or more), ancestral homeland (Nordic, other), civil status (married, other), gross salary, socioeconomic status (higher-,middle-, lower managerial, skilled- or unskilled manual worker) are known to be important factors for sickness absence [3, 16]. Other important factors tested are labour market sector (public, private), permanent or temporary employment[3], work-family conflict (high, partly, low) [9] and Body Mass Index (BMI) [17]. Different working conditions may also affect sickness absence, such as physical- and ergonomically adverse working conditions. Ergonomic exposure was measured using two questions from the baseline data. Respondents were asked whether their work require heavy lifting or comprised crooked, twisted or other unsuitable postures. Answers were given on a 4-point VDS and both questions were added and dichotomised using the median value as cut-off into high and low ergonomic exposure [18]. Social support was also added to control for psychosocial working conditions based on information from the DCSQ. Respondents answered six questions regarding aspects of social support, ranging from strongly disagree to strongly agree on a 4-point VDS. Each question were added and dichotomized using the median value into strong or weak social support. Confounding variables such as age, BMI and gross salary were treated as continuous and education, civil status, socioeconomic status, labour market sector, ancestral homeland, work-family conflict, ergonomic exposure and social support as categorical variables. Descriptive statistics of each confounding variables are presented in Table 2. Due to insignificant bivariate association's gross wage, civil status, ancestral homeland and work-family conflict were omitted as confounding variables. Physical activeness and smoking were subsequently omitted from the final logistic regression models because of insignificant estimates with alpha set to 0.05.

2.4 Target variable

Estimates from logistic regression models, odds ratios (OR) are calculated for Sick-Leave Category classification $(y = 1)$. The models are conducted separately for sex (men, women) and by gender composition (dominated by men or women, or gender balanced at 40-60% distribution).

2.5 Statistical methods

Pearson's chi-square test was used to test the bivariate association between explanatory variables and the target variable. Logistic regression was used to examine whether there is an association between the binary target variable $(y = 0,1)$ and one or more explanatory variables. Logistic regression estimates (OR) are presented crude and adjusted. Odds ratios are estimated using profile likelihood estimation with 95% Confidence Intervals (CI).

3. Results

3.1 Demographic characteristics of the study population

In Table 2 descriptive statistics for demographic and other variables are presented, women and men separately. Among women and men, the proportion of younger participants was lower in the SLC in comparison with the GPC. Participants in SLC had in general lower gross wage, lower education and lower socioeconomic status. Among women, the proportion employed in the public sector was higher in SLC, which was not the case among men. The proportion of men from non-Nordic countries, however, was higher in the SLC. The proportions of women and men with permanent jobs, part time, higher BMI value, bad ergonomic exposure and weak social support were larger in SLC than GPC. The proportion of high strain jobs was also higher among sick-listed participants. (Table 2)

TABLE 2

3.2 The association between job strain and belonging to the SLC, in women and men

High strain jobs were associated with significantly increased odds of belonging to the SLC among both women (Adj. OR 2.04 [1.62-2.57]) and men (Adj. OR 2.24 [1.67-3.01]). Additionally, the odds of belonging to the SLC were also higher among women assessing active jobs (Adj. OR 1.29 [1.06-1.57]), and among men (Adj. OR 1.37 [1.04-1.80]) assessing passive jobs. (Table 3)

TABLE 3

3.3 The association between job strain and belonging to the SLC with respect to the gender composition, in women and men

Among women working in male-dominated workplaces, high strain jobs were associated with the highest increased odds of belonging to the SLC with an adjusted OR of 2.87 [1.34-6.26]. This was also found among men in male-dominated workplaces, where high strain jobs (Adj. OR 2.53 [1.74-3.69]) were associated with higher odds of being in the SLC. Among men working in female-dominated workplaces, high strain (Adj. OR 1.69 [0.71-4.08]) jobs were insignificantly associated with increased odds of belonging to the SLC. (Table 4)

TABLE 4

4. Discussion

The main objective of this study was to investigate whether workplace gender composition has an influence on the association between job strain and sickness absence, in a general population of employed women and men. In line with the predictions of the demand control model we found that high strain jobs were associated with sickness absence for both women and men (H1). In addition, we noted the influence of gender composition on the association between high strain jobs and sickness absence in the case of both women and men. For women, the strongest association between high strain and sickness absence was evident in male-dominated workplaces. For men, the strongest association between high strain and sickness absence was also found in male-dominated workplace. These results supported the hypothesis (H2) that working in male-dominated workplaces increases the impact of high strain jobs on sickness absence for both women and men. Furthermore, the findings indicated that there was an insignificant association between high strain jobs and sickness absence for men in female-dominated workplaces. These results could be interpreted as supporting our third hypothesis (H3), that higher status associated with the male sex decreases the risk of an association. Finally, there was also an association between high strain

jobs and sickness absence for women in female-dominated workplaces and for women and men in balanced workplaces, although these associations were weaker.

This study showed that a minority position strengthened the association between high strain jobs and sickness absence for women but not for men. Kanter's [6] and Blau's [7] theories seem to be relevant mainly for women. However, men were also found to have a stronger association between high strain jobs and sickness absence in male-dominated workplaces. Workplaces dominated by men seem to be health adverse for both women and men. These findings are in line with some of the earlier research and hold especially for women who are likely to have very high or highest sick-leave rates in male-dominated workplaces or occupations [10, 18-22].

Applying modern gender theories, one could argue that these differences are caused by a gender order previously discussed in western societies (Courtenay 2000, Connell 2002). Due to the gender order, male behaviour is a social norm, generally favoured in the labour market and in the workplace. For women and men, minority position could, therefore, either be adverse or beneficial. In line with these theories, we found that minority position strengthens the role of job strain for women but weakens it for men. We also found that male-dominated workplaces to be especially adverse for women. Earlier studies [9, 22] also established that in a workplace where women are a minority, this could trigger stress and other adverse outcomes. Due to the vertical segregation, it may be that difference in work tasks between women and men is an important explanation in each workplace. For example, one British study showed that female and male nurses had the same levels of sickness absence which could indicate the relevance of work tasks [23].

Interestingly, we also found that male-dominated workplaces influenced the association between high strain jobs and sickness absence in men. This could be due to dominant masculine health related behaviour characterised by a tendency to conceal weaknesses and to avoid seeking help [11, 24]. Such strategies that also incorporate avoiding short-term sickness absence and working while ill, could have detrimental effects on health and work ability and lead to more long-term sickness absence, which is the outcome in the present study. Support for this is given in some recent Swedish studies, which report that being present at work, i.e. sickness presenteeism, is associated with negative health consequences and subsequent sickness absence [25-27]. If such health related strategies are also adopted by women in

workplaces dominated by men, it could further augment the adverse effects of a minority position and exposure to adverse psychosocial working conditions.

4.1 Methodological considerations

This study has both strengths and limitations. The strength is that the sample is based on an incident sick-leave cohort (SLC) and a general population cohort (GPC). There are no studies, as far as the present authors are aware, conducted with sick-leave incidents in a general population. Instead, most studies are retrospective or prospective and based on a population from specific occupational groups which could lead to bias [see for example 8, 28, 29]. Since this study is based on cross-sectional data, it is not possible to draw conclusions about causality. There are, however, a large number of studies that support the importance of psychosocial factors such as the DCS-model as predictor of bad health effects and sickness absence [3, 13, 14, 17]. Furthermore, this study is based on self reported data, which increase risk of so called recall bias. Recall bias could make the reliability questionable and, therefore, it is important to compare results from this study with other studies. Some of the odds ratio estimates in this study come with wide confidence intervals and these are important to interpret with caution. Furthermore, since no formal test of odds-ratios across strata has been performed, comparisons across strata should be made with caution. Still, such comparisons can provide valuable information of potential relationships. Finally, the operationalisation of the variable sex composition was crucial in this study. Three different levels were used based on information from the questionnaire; balanced represented a workforce with 40-60 percent of the employees of one of the two sexes. Two other questions answered were if there were more women or men in their workplaces. This approach is very similar to the operationalization that Leijon, Hensing et al [21] and Hensing and Alexanderson [22] used in their studies, but different to Mastekaasa [9], who used register data to analyse percentiles of the proportion of women working in each workplace. The approach used by Mastekaasa [9] has some advantages due to the register data, which is often more reliable than information from respondents' subjective perceptions and also provide the researcher with more detailed information. The operationalisation is important and needs to be considered.

5. Conclusion

Findings from this study indicated that a minority position strengthens high strain for women but weakens it for men. We found that male-dominated workplaces were adverse for both sexes and influenced the association between high strain and sickness absence. Modern gender theories suggest that structural explanations, such as discrimination between the sexes and higher social status associated with the male sex, could be an important explanation of the differences between women and men. However, results from this study need to be validated by further research.

References

1. Karasek, R., *Job Demands, Job Decision Latitude and Mental strain: Implications for Job Redesign.* Administrative Science Quarterly, 1979. **24**(2): p. 285-30.
2. Doef, M.V.d. and S. Maes, *The Job Demand-Control (-Support) Model and psychological well-being: A review of 20 years of empirical research.* Work & Stress, 1999. **13**(Routledge): p. 87-114.
3. Lidwall, U. and S. Marklund, *What is healthy work for women and men? - A case-control study of gender- and sector-specific effects of psycho-social working conditions on long-term sickness absence.* Work, 2006. **27**(2): p. 153-63.
4. Suominen, S., et al., *Job Strain, Life Events, and Sickness Absence: A Longitudinal Cohort Study in a Random Population Sample.* Journal of Occupational and Environmental Medicine, 2007. **49**(9): p. 990-996 10.1097/JOM.0b013e3181343e2b.
5. Virtanen, M., et al., *Job strain and psychologic distress: influence on sickness absence among finnish employees.* American Journal of Preventive Medicine, 2007. **33**(3): p. 182-187.
6. Kanter, R.M., *Men and Women of the Corporation*. 1977, New York: BasicBook.
7. Blau, P., *Inequality and heterogeneity*. 1977, New York: Free Press.
8. Voss, M., B. Floderus, and F. Diderichsen, *Physical, psychosocial, and organisational factors relative to sickness absence: a study based on Sweden Post.* Occup Environ Med, 2001. **Mar;58**(3): p. 178-84.

9. Mastekaasa, A., *Sickness absence in female- and male-dominated occupations and workplaces.* Social Science & Medicine, 2005. **60**(10): p. 2261-2272.

10. Bryngelson, A., J. Bacchus Hertzman, and J. Fritzell, *The relationship between gender segregation in the workplace and long-term sickness absence in Sweden.* Scandinavian Journal of Public Health, 2011. **39**(6): p. 618-626.

11. Courtenay, W.H., *Constructions of masculinity and their influence on men's well-being: a theory of gender and health.* Soc Sci Med, 2000. **50**(10): p. 1385-401.

12. Conell, R.W., ed. *Gender*. 2002, Polity Press: Cambridge.

13. Östlin, P., ed. *Gender inequalities in health: the significance of work. In: Wamala, S. and J. Lynch (eds) Gender and socioeconomic inequalities in health*. 2002, Studentlitteratur: Lund.

14. Navarro, V. and L. Shi, *The political context of social inequalities and health.* Soc Sci Med, 2001. **52**(3): p. 481-91.

15. Sanne, B., et al., *The Swedish Demand-Control-Support Questionnaire (DCSQ): factor structure, item analyses, and internal consistency in a large population.* Scand J Public Health, 2005. **33**(3): p. 166-74.

16. Piha, K., et al., *Interrelationships between education, occupational class, income and sickness absence.* Eur J Public Health Econ, 2009. **20**(3): p. 276-80.

17. Ferrie, J.E., et al., *BMI, obesity, and sickness absence in the Whitehall II study.* Obesity (Silver Spring), 2007. **15**(6): p. 1554-64.

18. Alexanderson, K., *Sickness absence in a Swedish county with reference to gender, occupation pregnancy and parenthood.* 1995, Linköping: Linköping University.

19. Alexanderson, K., et al., *Epidemiology of Sickness Absence in a Swedish County in 1985, 1986 and 1987 A Three Year Longitudinal Study with Focus on Gender, Age and Occupation.* Scandinavian Journal of Public Health, 1994. **22**(1): p. 27-34.

20. Hensing, G., et al., *Sick-leave due to minor psychiatric morbidity: role of sex integration.* Social Psychiatry and Psychiatric Epidemiology, 1995. **30**(1): p. 39-43.

21. Leijon, M., G. Hensing, and K. Alexanderson, *Sickness absence due to musculoskeletal diagnoses: association with occupational gender segregation.* Scand J Public Health, 2004. **32**: p. 94-101.

22. Hensing, G. and K. Alexanderson, *The association between sex segregation, work conditions, and sickness absence among employed women.* Occup Environ Med, 2004. **61**(2): p. e7.

23. Evans, O. and A. Steptoe, *The contribution of gender-role orientation, work factors and home stressors to psychological well-being and sickness absence in male- and female-dominated occupational groups.* Soc Sci Med, 2002. **54**(4): p. 481-92.

24. Verdonk, P., H. Seesing, and A.d. Rijk, *Doing masculinity, not doing health? A qualitative study among Dutch male employees about health beliefs and workplace physical activity.* BMC Public Health, 2010. **10**(712).

25. Gustafsson, K. and S. Marklund, *Consequences of sickness presence and sickness absence on health and work ability: A Swedish prospective cohort study.* Int J Occup Med Environ Health, 2011. **24**(2): p. 153-65.

26. Bergström, G., et al., *Does sickness presenteeism have an impact on future general health?* Int Arch Occup Environ Health, 2009. **82**(10): p. 1179-90.

27. Bergström, G., et al., *Sickness Presenteeism Today, Sickness Absenteeism Tomorrow? A Prospective Study on Sickness Presenteeism and Future Sickness Absenteeism.* J Occup Environ Med, 2009. **51**(6): p. 629-38.

28. Stansfeld, S., et al., *Work characteristics predict psychiatric disorder: prospective results from the Whitehall II Study.* Occup Environ Med, 1999. **May;56**(5): p. 302-7.

29. Vingard, E., et al., *Long-term sick-listing among women in the public sector and its associations with age, social situation, lifestyle, and work factors: a three-year follow-up study.* Scand J Public Health, 2005. **33**(5): p. 370-5.

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Table 1. The procedure of study selection in the general population cohort (GPC) and the sick-listed cohort (SLC).

Cohorts	Participants in HAP*, n			Participants, n		
	Women	**Men**	**Total**	**Women**	**Men**	**Total**
General population cohort (GPC)	2234	1793	4027	1464	1238	2702
Sick-listed cohort (SLC)	2521	1287	3808	1871	1022	2893
Total	4755	3080	7835	3535	2260	5595

*HAP, the Health Assets Project

Table 2. Characteristics of the participants in the General Population Cohort (GPC) and the Sick-Listed Cohort (SLC), n=5595

	Women		Men	
	GPC (%, n)	*SLC (%, n)*	*GPC (%, n)*	*SLC (%, n)*
Age, yr	*	*	*	*
19-30	14 (203)	8 (150)	17 (215)	12 (125)
31-50	49 (722)	46 (868)	49 (610)	40 (412)
51-64	37 (539)	46 (853)	34 (413)	48 (485)
Gross wage (SEK)	*	*	*	*
0-149,000	15 (216)	10 (181)	10 (124)	6 (67)
150,000-299,000	63 (918)	73 (1374)	42 (523)	57 (580)
>300,000	22 (330)	17 (335)	48 (591)	37 (375)
Education	*	*	*	*
Elementary school or less	17 (239)	21 (380)	17 (210)	31 (309)
High School	39 (573)	40 (748)	48 (594)	49 (489)
University or more	44 (638)	39 (725)	35 (427)	20 (207)
SEI	*	*	*	*
Higher managerial	16 (227)	11 (203)	21 (256)	10 (104)
Middle managerial	30 (427)	27 (498)	24 (290)	16 (158)
Lower managerial	18 (258)	15 (277)	9 (106)	7 (67)
Skilled manual	16 (241)	21 (400)	20 (249)	29 (288)
Unskilled manual	20 (287)	26 (477)	26 (312)	38 (383)
Sector	*	*		
Public	58 (824)	68 (1243)	26 (317)	28 (269)
Private	42 (607)	32 (581)	74 (896)	72 (705)
Civil status				
Married	51 (748)	52 (974)	48 (594)	51 (522)
Other	49 (716)	48 (897)	52 (644)	49 (500)
Ancestral homeland			*	*
Nordic	94 (1372)	92 (1721)	91 (1128)	88 (896)
Other	6 (92)	8 (150)	9 (110)	12 (126)
Employment	*	*	*	*
Permanent	90 (1293)	94 (1725)	93 (1128)	97 (965)
Temporarily	10 (152)	6 (121)	7 (90)	3 (29)
Full or part time	*	*	*	*
Full-time (40h week)	67 (970)	62 (1148)	94 (1151)	91 (902)
Part-time (<40h week)	33 (470)	38 (689)	6 (75)	9 (93)
BMI	*	*	*	*
≤ 25	71 (892)	61 (974)	48 (494)	42 (347)
26-30	22 (283)	25 (408)	40 (405)	43 (359)
≥ 30	7 (91)	14 (222)	12 (122)	15 (124)
Ergonomic exposure			*	*
High	60 (880)	46 (856)	59 (737)	39 (395)
Low	40 (584)	54(1015)	41 (501)	61 (627)
Social support	*	*	*	*
Weak	43 (624)	51 (949)	44 (540)	52 (527)
Strong	57 (840)	49 (922)	56 (698)	48 (495)
Work-family conflict				
High	18 (251)	18 (327)	14 (173)	12 (119)
Moderate	34 (485)	33 (594)	29 (341)	27 (261)
Low	48 (679)	49 (888)	57 (677)	61 (598)
Demand-Control	*	*	*	*
Low-strain job	30 (440)	21 (400)	33 (407)	25 (247)
High-strain job	17 (246)	28 (516)	13 (166)	25 (258)
Active job	30 (440)	29 (542)	33 (405)	25 (258)
Passive job	23 (334)	22 (413)	21 (260)	25 (259)
Gender composition	*	*	*	*
Dominated by Women	65 (931)	75 (1339)	12 (147)	15 (142)
Balance (40-60%)	20 (285)	16 (293)	25 (295)	18 (176)
Dominated by Men	15 (211)	9 (160)	63 (742)	67 (640)

Pearson chi-sq, * indicate p-values: ≤0.05

Table 3. The association between Demand-Control and belonging to the SLC, in women and men

	Women		Men	
	[crude] *OR* (95%CI)	[adj.] *OR*[a] (95%CI)	[crude] *OR* (95%CI)	[adj.] *OR*[a] (95%CI)
Demand-Control				
Low-strain	1.00[b]	1.00[b]	1.00[b]	1.00[b]
High-strain	2.32 (1.90-2.85)	2.04 (1.62-2.57)	2.56 (1.99-3.29)	2.24 (1.67-3.01)
Active	1.36 (1.14-1.64)	1.29 (1.06-1.57)	1.05 (0.84-1.31)	1.25 (0.98-1.60)
Passive	1.37 (1.13-1.67)	1.24 (0.99-1.55)	1.64 (1.30-2.07)	1.37 (1.04-1.80)

[a] Estimates from a logistic regression model ('adjusted') including age, BMI, full or part time, sector, education, socio-economic index (SEI), ergonomic exposure and social support

[b] Reference category

Table 4. The association between high-strain jobs and belonging to the SLC with respect to the gender composition (dominated by men or by women, or gender balanced at 40-60% distribution)[a]

	Women		Men	
	[crude] OR^{b} (95% CI)	[adj.] $OR^{a,b}$ (95% CI)	[crude] OR^{b} (95% CI)	[adj.] $OR^{a,b}$ (95% CI)
Workplace				
Balance	2.41 (1.51-3.88)	1.74 (1.01-3.02)	2.65 (1.47-4.76)	2.04 (0.99-4.23)
Dominated by Men	4.08 (2.23-7.67)	2.87 (1.34-6.26)	2.92 (2.13-4.03)	2.53 (1.74-3.69)
Dominated by Women	2.17 (1.69-2.78)	1.99 (1.51-2.63)	2.06 (1.03-4.20)	1.69 (0.71-4.08)

[a] Estimates from a logistic regression model ('adjusted') including age, BMI, full or part time, sector, education, socio-economic index (SEI), ergonomic exposure and social support, low-strain is the reference category.

[b] Reference category is low strain jobs