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Work–life interference and physician-certified sick leave: a prospective study of a general working population

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Background: Work–life interference has been associated with adverse health outcomes. Here, we quantify the association between work–life interference and subsequent sick leave. **Methods:** Respondents from a randomly drawn cohort of the general working Norwegian population were interviewed in 2009, 2013 and/or 2016. Mixed-effects logistic regression models were used to assess prospective associations of self-reported work–life interference and risk of subsequent physician-certified sick leave of 1–16 days (low-level) and >16 days (high-level) in strata of men and women. To quantify the importance of work–life interference as risk factors for sick leave, we estimated the population attributable risk (PAR). **Results:** Both low- and high-level sick leave were most prevalent among women while the prevalence of work–life interference was similar between sexes. Risk of sick leave was higher among women reporting work–life interference sometimes or often in comparison with seldom or never {low- and high-level sick leave odds ratio (OR) = 1.21 [95% confidence interval (CI) = 1.07–1.37] and 1.30 (95% CI = 1.14–1.49), respectively}. The associations for high-level sick leave progressively increased with the level of work–life interference [highest OR = 1.44 (95% CI = 1.19–1.75)]. In men, there was no consistent higher risk of sick leave according to more frequent work–life interference [low- and high-level sick leave OR = 1.00 (95% CI = 0.87–1.14) and 0.98 (95% CI = 0.84–1.16), respectively], but the risk of high-level sick leave tended to be higher among men reporting work–life interference often (OR = 1.21, 95% CI = 0.98–1.50). Estimating PAR, 6.69% (95% CI = 1.52–11.74) of low-level and 9.94% (95% CI = 4.22–15.45) of high-level sick leave could be attributed to work–life interference among women. **Conclusions:** Self-reported work–life interference was associated with a higher risk of sick leave, with the most consistent results among women.

Introduction

Balance and potential conflict between paid employment and domains outside work are often referred to as work–family or work–life conflict, balance or interference. In 2016, about one in five workers in the European Union reported poor work–life balance.[1] The reconciliation of work and life demands is sought after not only by individuals but also by businesses and policymakers. Work–life interference arises due to requirements to fulfil incompatible expectations in both the work and the home arena. The rise in job demands and requirements associated with long working hours, frequent overtime and workplace understaffing contributes to this imbalance.[2] At home, interference frequently stems from demands associated with care responsibilities and demands associated with the pursuit of family, friends and interests.[3] Although rising flexibility in both the work and family domains, e.g. via opportunities for flexible working hours and telework, have been suggested to offer opportunities to improve work–life interference, concerns have been raised that new challenges may also arise as the boundaries between work and leisure become blurred.[4]

Within most theoretical frameworks work–life interference is defined as a form of inter-role conflict whereby the demands of the work and family roles are irreconcilable.[2,5] This may cause strain over time, which may contribute to poorer health and increased risk of sick leave. In line with this perspective, observational studies have reported associations with risk of burnout, exhaustion and work-related strain.[2,3,6] One meta-analysis found that work–life interference was associated with life satisfaction and psychological strain, as well as somatic symptoms and mental health outcomes such as depression and anxiety.[3] Similarly, a recent review of the literature found that work–life interference was associated with poor mental and physical health, in European populations.[4] Stress-related disorders are among the leading causes of long-term sick leave.[7]

Sick leave can be defined as absence from work due to impaired functioning caused by health problems. Long-term sick leave comes at a substantial financial loss to society and can be a gateway to labour market exclusion.[8] Few studies examine the relationship between work–life interference and subsequent sick leave, and the results are inconsistent. A systematic review of eight studies concluded that there is moderate evidence for a prospective association between work–life interference and subsequent sickness absence, but there is a need for further studies, especially from representative samples.[9] The same systematic review, further identified that work–life interference could explain a proportion of the association between female sex and increased sickness absence. Recently, a study of the Swedish general working population reported a significant association between work–life interference and subsequent sick leave in both men and women.[10]

The aim of the present study was to investigate the prospective associations between self-reported work–life interference and subsequent physician-certified sick leave. Considering the literature, we hypothesize that effects may be larger in women, and hence examine

effects in women and men separately. Lastly, to indicate the importance of work–life interference as a risk factor for sick leave at the population level, we calculate the population attributable risk (PAR).

Methods

Study population and design

The Survey of Level of Living-Working Conditions is an ongoing and nationwide survey of Norwegian residents aged 16–66 years, where Statistics Norway collects data every 3 years by the mode of phone interviews (0.5% of interviews are completed face-to-face). The design of the study includes a longitudinal element, meaning that individuals are invited to participate multiple times. The present study included data from three consecutive surveys. The first survey (data collection: June–January 2009/10) conducted 12 255 interviews (60.9%) out of a gross sample of 20 136 randomly drawn from the population. The second survey (April–January 2013/14) re-invited the same gross sample to participate and 10 875 responded (53.1%). The third survey (September–April 2016/17) re-invited two-thirds of the original gross sample and replaced one-third with a new randomized subsample due to a planned rotation of the panel selection, conducting 10 655 interviews (52.6%). At each iteration of the survey, participants aged 17, 18 and 19, and immigrants were supplemented to ensure the representativeness of the sample. Statistics Norway report few differences between the respondents and the gross sample on the benchmarks of age, sex and region.[11–13]

From the three surveys, we included only respondents that reported to be in paid work for at least 1 h or temporarily absent from work during the interview week. In addition, the respondent had to be registered with an employee relationship of at least 50 working days in the year of the survey as well as in the subsequent year, as judged by data from the Norwegian Labour and Welfare Administration's sickness benefit register. Respondents that were self-employed with no employees, had missing values on either the exposure variable, education level or occupation, were excluded.

Final sample

The respondents in the three surveys constituted a sample of 33 795 observations nested in 20 341 individuals. We excluded 7812 observations not defined as a current worker at the time the survey was conducted and 3895 observations who did not meet the criteria for a minimum of 50 working days during the survey year and the subsequent year. The final sample that was included in statistical analyses comprised 21 663 observations nested in 13 473 individuals. For additional details, see table 1.

Table 1 Sample

	Sample per survey			Sample in total	
	2009	2013	2016	Observations	Individuals
Gross sample[a]	20 136	20 492	20 272	60 900*	
Net sample[b]	12 255	10 875	10 665	33 795	20 341
Response percentage	60.9	53.1	52.6	55.5	
Working population[c]	9279	8375	8329	25 983	15 866[d]
Active employee relationship of at least 50 days[e]	7709	7077	7302	22 088	13 731
Eligible sample[f]				21 663	13 473

a: Randomly drawn population sample (* maximum number of possible observations).
b: Total number of respondent including employed and non-employed individuals.
c: Respondents who were in paid work for at least one hour during the interview week, or were temporarily absent from such work were interviewed about working conditions.
d: Sum of individuals that were interviewed about working conditions in one survey ($n = 8504$), two surveys ($n = 4607$) and three surveys ($n = 2755$).
e: Registered with an active employee relationship of at least 50 actual working days in the survey year and the following year in the sickness absence register.
f: Eligible sample after deletion of respondents with missing values [$n = 258$ (1.9%) individuals].

Measurements

Exposure

Work–life interference was measured with the question: 'How often do the demands at your work interfere with your home and family life?' Answer categories were 'very seldom or never', 'rather seldom', 'sometimes', 'rather often' or 'very often or always'. By combining 'very seldom or never' with 'rather seldom' and by combining 'rather often' with 'very often or always', we created a three-level discrete variable with the categories 'seldom or never', 'sometimes' or 'often or always'. In addition, the 'sometimes' and 'often or always' categories were combined into a single category ('combined') to dichotomize the exposure measure.

Outcomes

Sick leave data were obtained from the Norwegian Labour and Welfare Administration's sickness benefit register. In Norway, employees are fully compensated from the first day with sick leave. Employees have the right to self-certify for three sick leave periods of up to 3 days, and some up to 8 consecutive days. If a single period of absence exceeds the specified number of days (i.e. 3 or 8 days), a physician's certificate is required. The sickness benefit registry includes physician-certified sick leave data (i.e. not self-certified) for workers living in Norway registered with an employee relationship of at least 4 h of work per average working week. Self-employed workers are not included in the registry. Data on sick leave were available as accumulated physician-certified sick leave days per calendar year. Consequently, the years 2010, 2014 and 2017 were used as the follow-up period for respondents.

The distribution of the number of sick leave days per year in the study population is highly skewed and clustered around zero, which complicates multi-level statistical modelling. Accordingly, the sick leave variable was recoded into three categories: '0 days', '1–16 days' (low-level of sick leave) and '>16 days' (high-level sick leave). The cut-off at 16 days was chosen since after this number of days, the employer is no longer required to pay the employee's sickness absence. Moreover, this number is close to the median number of days of sick leave observed in the study (15 days). After 16 days of sickness absence, payment is made by the Norwegian Labour and Welfare Administration.

Covariates

Information about sex, age, education level, the number of actual working days, working hours per week, marital status, number of children living at home and baseline sick leave were derived from administrative registry data. Occupation was assessed during the telephone interview from self-report and coded by a trained interviewer into a professional title in accordance with the International Standard Classification of Occupations (ISCO-08). Professional titles were categorized into 17 occupational groups using the first and second digits of the ISCO-08 code (see Supplementary table S1).

Statistical analysis

We used the Chi-square test to assess the distribution of work–life interference and sick leave by covariates in strata of sex. To assess the association between work–life interference and the risk of sick leave, we applied generalized linear mixed models (GLMM). The approach

Table 2 Mixed effects logistic regression: sick leave at 1-year follow-up regressed on work–life interference measured at baseline

	Low-level sick leave ≤ 16 days n^a = 8129/9766, cases^b = 2247/1656		High-level sick leave > 16 days n^c = 7956/9447, cases^b = 2074/1337	
Incidence	Women *n* (%)	Men *n* (%)	Women *n* (%)	Men *n* (%)
Seldom/never	1371 (27.0)	1082 (18.1)	1206 (24.5)	871 (15.1)
Sometimes	622 (28.7)	403 (16.0)	564 (26.8)	279 (11.6)
Often	286 (28.5)	211 (14.8)	333 (31.7)	216 (15.1)
Combined	908 (28.6)	614 (15.5)	897 (28.4)	495 (12.9)
	OR^d (95% CI)	OR^d (95% CI)	OR^d (95% CI)	OR^d (95% CI)
Model no. 1				
Seldom/never	1.00	1.00	1.00	1.00
Sometimes	1.12 (0.97–1.33)	0.85 (0.74–0.99)	1.20 (1.02–1.41)	0.67 (0.54–0.82)
Often	1.11 (0.92–1.33)	0.77 (0.64–0.92)	1.76 (1.43–2.17)	0.99 (0.78–1.26)
Combined	1.11 (0.99–1.26)	0.82 (0.72–0.93)	1.36 (1.18–1.57)	0.78 (0.65–0.93)
Model no. 2				
Seldom/never	1.00	1.00	1.00	1.00
Sometimes	1.20 (1.06–1.36)	1.01 (0.87–1.17)	1.25 (1.06–1.48)	0.86 (0.70–1.05)
Often	1.21 (1.02–1.42)	1.00 (0.82–1.21)	1.80 (1.45–2.23)	1.23 (0.96–1.57)
Combined	1.23 (1.09–1.40)	1.00 (0.88–1.14)	1.40 (1.21–1.63)	0.92 (0.77–1.10)
Model no. 3				
Seldom/never	1.00	1.00	1.00	1.00
Sometimes	1.22 (1.06–1.40)	1.01 (0.87–1.17)	1.24 (1.05–1.47)	0.78 (0.64–0.96)
Often	1.23 (1.02–1.49)	0.99 (0.81–1.19)	1.71 (1.38–2.12)	1.19 (0.93–1.51)
Combined	1.23 (1.08–1.39)	1.00 (0.88–1.14)	1.36 (1.17–1.58)	0.94 (0.79–1.12)
Model no. 4				
Seldom/never	1.00	1.00	1.00	1.00
Sometimes	1.21 (1.05–1.39)	1.00 (0.87–1.16)	1.21 (1.04–1.41)	0.82 (0.69–0.99)
Often	1.16 (0.96–1.40)	0.97 (0.81–1.18)	1.44 (1.19–1.75)	1.21 (0.98–1.50)
Combined	1.21 (1.07–1.37)	1.00 (0.87–1.14)	1.30 (1.14–1.49)	0.98 (0.84–1.16)

a: Net sample excluding cases (observations) of high-level sick leave from the denominator (women/men).
b: Number of sick leave observations during follow-up (women/men).
c: Net sample excluding cases (observations) with low-level sick leave from the denominator.
Combined: combination of the 'sometimes' and 'often' work–life interference exposure measures.
d: Fixed effects from the random effects logistic regression models.
Model no. 1 Adjustment for age.
Model no. 2 +Number of actual working days (continuous), working hours per week, occupation and education level and random intercept.
Model no. 3 +Children under 18 living at home and marital status.
Model no. 4 +Sick leave days the year of the survey interview.

is appropriate when analysing non-normal outcome variables that are clustered within units, such as repeated observations from the same individuals in this case, and when the follow-up does not vary between cases. GLMMs use all available data by computing maximum likelihood estimates based on valid data from at least one time point.

All analyses were carried out using the statistical software R v.3.6.1. We used the glmer command of the package lme4 (logistic link function) to compute mixed effects logistic regressions. Estimates were based on an adaptive Gaussian Hermite approximation of the likelihood with 10 integration points.

Four time-lagged regression models were run with sick leave regressed on work–life interference the previous year. All models included random intercepts to control for dependency of measurements within individuals (i.e. considering the individual's general level of sick leave across time). Model 1 (crude model) was adjusted for age. Further adjustments for number of actual working days, working hours per week, occupation and educational level were carried out in model 2. In model 3, we adjusted for children under the age of 18 living at home and marital status. Lastly, model 4 was further adjusted for sick leave days the year of the survey interview. The prospective associations between work–life interference and sick leave were reported as odds ratios (ORs) with 95% confidence intervals (CIs). All analyses were stratified by sex. Statistical significance was accepted at $P < 0.05$.

The results of model 4 were used to calculate the population attributable risk percent (PAR %) of work–life interference among women. PAR was calculated using the formula Pd*((OR − 1)/OR), where Pd is the proportion of cases exposed to the risk factor in question. The lower and upper limits of the 95% CI for PAR% were calculated from the general PAR% formula using the lower and upper limits of the 97.5% CI for Pd and OR. Summary attributable risk was calculated according to the formulae: 1(1 PARvar1)(1 PARvar2)(1 PARvar3).[14] The interpretations of PAR estimates are based on the theoretical assumption that the exposure–response relationship is causal.

Results

Descriptive statistics

Supplementary table S1 shows the number of observations, the prevalence of different levels of work–life interference, and the prevalence of low-level and high-level sick leave according to baseline characteristics among men and women in the study population. The prevalence of often work–life interference was highest in the age group 35–49 years in both women and men, which is consistent with the higher prevalence among respondents reporting that they were living with children at home. Work–life interference was also higher among respondents with higher levels of attained education and in occupations responsible for the management, teaching and among professionals within and outside the health sector. Sick leave was more prevalent among women than men and among

respondents with a lower level of attained education. In terms of age groups, a low level of sick leave between 1–16 days was more prevalent with younger age, while a high level of sick leave exceeding 16 days were more prevalent with a higher age. There was no marked difference in the prevalence of sick leave according to having children at home.

Associations between work–life interference and sick leave at 1-year follow-up among men and women

Table 2 shows frequency distributions as well as ORs and 95% CIs for low-level and high-level sick leave according to the frequency of self-reported work–life interference in strata of men and women.

Among women, ORs for both low-level and high-level sick leave were in direction of increased ORs [low-level sick leave OR = 1.21 (95% CI = 1.05–1.39) and 1.16 (95% CI = 0.96–1.40), for sometimes and often work–life interference, respectively]. ORs for high-level sick leave increased with a higher level of work–life interference in a linear pattern [high-level sick leave OR = 1.21 (95% CIs = 1.04–1.41) and 1.44 (95% CI = 1.19–1.75), for sometimes and often work–life interference, respectively], suggesting a dose–response relationship.

Among men, ORs for both low-level and high-level sick leave were in direction of no difference in risk, when evaluating the two exposure categories (sometimes or often) combined [low- and high-level sick leave OR = 1.00 (95% CI = 0.87–1.14) and 0.98 (95% CI = 0.84–1.16), respectively]. However, the highest risk for men was observed for high-level sick leave [OR = 1.21 (95% CI = 0.98–1.50)] among those reporting often experiencing work–life interference.

Population attributable risk to work–life interference

To quantify the potential importance of work–life interference as a risk factor for sick leave at the population level, we estimated the PAR of sick leave according to work–life interference. PAR was estimated for women only, because the association between work–life interference and sick leave was inconclusive for men. When combining both categories of more frequent work–life interference, the model estimates that 6.69% (95% CI = 1.52–11.74) of low-level sick leave and 9.94% (95% CI = 4.22–15.45) of high-level sick leave in the follow-up year could be attributed to work–life interference (table 3).

Discussion

The aim of this study was to investigate the association between work–life interference and sick leave among women and men in a general working population sample. Results showed consistent associations between higher frequency of work–life interference and both low- and high-level sick leave among women, even after adjusting for sick leave at baseline. The associations were less consistent among men. Estimates of PAR show that 6.69% of low-level and 9.94% of high-level sick leave could be attributed to work–life interference among women.

The findings add to the growing literature indicating that interference between work and private life can cause strain which may subsequently lead to long-term sick leave.[2,3,6] They are in line with previous findings suggesting that work–life interference increases the risk of sickness absence.[6] While previous studies showed an association with self-reported sick leave, the present study shows an association with the risk of registered sick leave, which strengthens the data in support of an association.

In the study population, the frequency of work–life interference was similar among both men and women, but women had a much higher prevalence of sick leave than men. Interestingly, an association between work–life interference and sick leave was mainly observed among women. One possible explanation could be that women on average experience work–life interference more intensely than men, although not necessarily more often. It is a limitation of our study that we only measured the frequency of work–life interference and not the 'intensity' per se. Another possible explanation is that women could be more susceptible than men to the potential health consequences of a given level of interference between work and life. A higher susceptibility could again be explained within the framework of the double-burden hypothesis, which states that despite recent changes in household organization, women still carry the primary burden of domestic duties.[15] When domestic demands meet work demands, women face pressure from two domains, creating a double burden that, according to the hypothesis, can contribute to ill health,[16] which may lead to a higher risk of subsequent sick leave. However, our results do not rule out the role of work–life interference as a potential risk factor for high-level sick leave among men but rather suggest that it may be more important among women. In comparison, a study of nearly 12 000 Swedish twin pairs found that work–life interference was associated with higher odds of sick leave, but after controlling for health and familial factors, the association remained for sick leave due to stress-related diagnoses for men only.[17] Therefore, we need further studies to ascertain whether the level at which work–life interference may impact health and the risk of sick leave is different for women and men, in addition to identifying the factors related to the life domain, work domain, or both, that have the most influence in this regard.

The present study carries many methodological strengths, including the use of a large, randomly drawn representative sample of the Norwegian working population, a prospective design, as well as the use of registry-based data to measure the number of sick leave days per year. Analyses performed by statistics Norway suggest that although non-response was more frequent among invited participants with an elementary level of education, only minor differences were found between responders and non-responders in terms of age, gender and geographical region.[11] The use of registered sickness absence data minimized loss to follow-up, and mixed-model analyses are also in part robust to attrition and give unbiased results when the missingness is not completely random but can be fully accounted for by variables in the model.

Table 3 Population attributable risk

	Sick leave ≤ 16 days n^a = 8254/9940, cases^b = 2279/1696		Sick leave > 16 days n^c = 8078/9610, cases^b = 2103/1366	
	Women PAR (%) (95% CI)	Men PAR (%) (95% CI)	Women PAR (%) (95% CI)	Men PAR (%) (95% CI)
Model no. 3				
Sometimes	4.71 (0.78–8.62)	–	6.69 (1.52–11.74)	–
Often	1.72 (0.74–4.27)	–	4.88 (1.91–7.85)	–
Combined	6.69 (1.52–11.74)	–	9.94 (4.22–15.45)	–

a: Net sample excluding cases (observations) of high-level sick leave from the denominator (women/men).
b: Number of sick leave observations during follow-up (women/men).
c: Net sample excluding cases (observations) with low-level sick leave from the denominator.

Sick leave was measured as the accumulated number of days during a calendar year, because precise start and stop dates for a given period of sick leave were not available. As such, the follow-up period is the year after the survey for most respondents, but the same year as the survey for some respondents. Theoretically, it is also possible that several sick leave periods add up to our definition of high-level sick leave. However, we consider it less likely that very many employees with high-level sick leave have several short-term spells. Moreover, work–life interference was operationalized using a single-item measure 'How frequently do the demands at work disturb your home or family life?'. There is no single validated widely accepted measure of work–life interference, which may complicate comparison of different studies. In the present study, we are also unable to capture details regarding the nature of work–life interference such as directionality (work-to-life or life-to-work),[3,18] or type of interference (time, strain, behaviour or energy-based),[4,5] and this a limitation. Finally, bidirectionality or reverse causation cannot be ruled out; poor health in itself could impact on work–life interference, not only the other way around.[4]

Conclusion

Self-reported work–life interference was associated with a higher risk of register-based sick leave in the following year in a representative sample of Norwegian workers. The association appeared stronger and more consistent among women, with more pronounced risk estimates for high-level sick leave.

Supplementary data

Supplementary data are available at *EURPUB* online.

Conflicts of interest: None declared.

Key points

- As the lines between work and leisure become blurred, there is increasing concern about the potential health consequences of work–life interference.
- Here, we show that work–life interference is associated with an increased risk of subsequent sick leave, most clearly among women.
- The risk of high-level sick leave (>16 days) increases with increased work–life interference among women, suggesting a dose–response relationship
- The results are less clear among men, but with a tendency towards an increased risk of high-level sick leave among those reporting often experiencing work–life interference.
- The findings suggest that work–life interference could be a risk factor for sick leave and that women could be more susceptible than men.

Data availability

Statistics Norway has an established policy for data sharing. Requests for data (i.e. The Norwegian Survey on Living conditions—working conditions) can be addressed to the Norwegian Centre for Research Data (https://nsd.no/).

References

1 Eurofound. Striking a balance: reconciling work and life in the EU.Luxemburg: Publications Office of the European Union, 2018.

2 Allen TD, Herst DE, Bruck CS, Sutton M. Consequences associated with work-to-family conflict: a review and agenda for future research. *J Occup Health Psychol* 2000;5:278–308.

3 Amstad FT, Meier LL, Fasel U, et al. A meta-analysis of work-family conflict and various outcomes with a special emphasis on cross-domain versus matching-domain relations. *J Occup Health Psychol* 2011;16:151–69.

4 Borgmann LS, Rattay P, Lampert T. Health-related consequences of work-family conflict from a European perspective: results of a scoping review. *Front Public Health* 2019;7:189.

5 Greenhaus JH, Beutell NJ. Sources of conflict between work and family roles. *Acad Manag Rev* 1985;10:76–88.

6 Antai D, Oke A, Braithwaite P, Anthony DS. A 'balanced' life: work-life balance and sickness absence in four Nordic countries. *Int J Occup Environ Med* 2015;6:205–22.

7 Gemes K, Frumento P, Almondo G, et al. A prediction model for duration of sickness absence due to stress-related disorders. *J Affect Disord* 2019;250:9–15.

8 Hultin H, Lindholm C, Moller J. Is there an association between long-term sick leave and disability pension and unemployment beyond the effect of health status?–a cohort study. *PLoS One* 2012;7:e35614.

9 Nilsen W, Skipstein A, Østby KA, Mykletun A. Examination of the double burden hypothesis-a systematic review of work-family conflict and sickness absence. *Eur J Public Health* 2017;27:465–71.

10 Hagqvist E, Lidwall U, Leineweber C. Is work-life interference a risk factor for sickness absence? A longitudinal study of the Swedish working population. *Eur J Public Health* 2022;32:398–401.

11 Wilhelmsen M. Samordnet levekårsundersøkelse 2009 –Tverrsnitt. Tema: Arbeidsmiljø. Report in Norwegian. Oslo: Statistics Norway, 2010.

12 Revold MK, Bye LS. Levekårsundersøkelsen om arbeidsmiljø 2016; Dokumentasjon. Report in Norwegian. Oslo: Statistics Norway, 2017.

13 Vrålstad S, Revold MK. Levekårsundersøkelsen om arbeidsmiljø 2013; Dokumentasjonsrapport. Report in Norwegian. Oslo: Statistics Norway, 2014.

14 Bruzzi P, Green SB, Byar DP, et al. Estimating the population attributable risk for multiple risk factors using case-control data. *Am J Epidemiol* 1985;122:904–14.

15 Cunha M, André S, Aparício G, et al. Organization of housework in heterosexual couples: systematic review of the literature. *Procedia – Soc Behav Sci* 2016;217:459–68.

16 Notten N, Grunow D, Verbakel E. Social policies and families in stress: gender and educational differences in work-family conflict from a European perspective. *Soc Indic Res* 2017;132:1281–305.

17 Svedberg P, Mather L, Bergstrom G, et al. Work-home interference, perceived total workload, and the risk of future sickness absence due to stress-related mental diagnoses among women and men: a prospective twin study. *Int J Behav Med* 2018;25:103–11.

18 Mesmer-Magnus JR, Viswesvaran C. Convergence between measures of work-to-family and family-to-work conflict: a meta-analytic examination. *J Vocat Behav* 2005;67:215–32.